

Presented to the City of Montreal by the Montreal & North-Western Railway Co.

Montreal -

MONTREAL BUSINESS SKETCHES

PREPARED BY THE CITY OF MONTREAL

AND PUBLISHED BY THE CANADA RAILWAY ADVERTISING COMPANY

ST. LAWRENCE RIVER BRIDGE.

PUBLISHED BY THE
CANADA RAILWAY ADVERTISING COMPANY



MONTREAL:

PRINTED BY M. LONGMOORE & CO., GAZETTE JOB OFFICE.
1865.

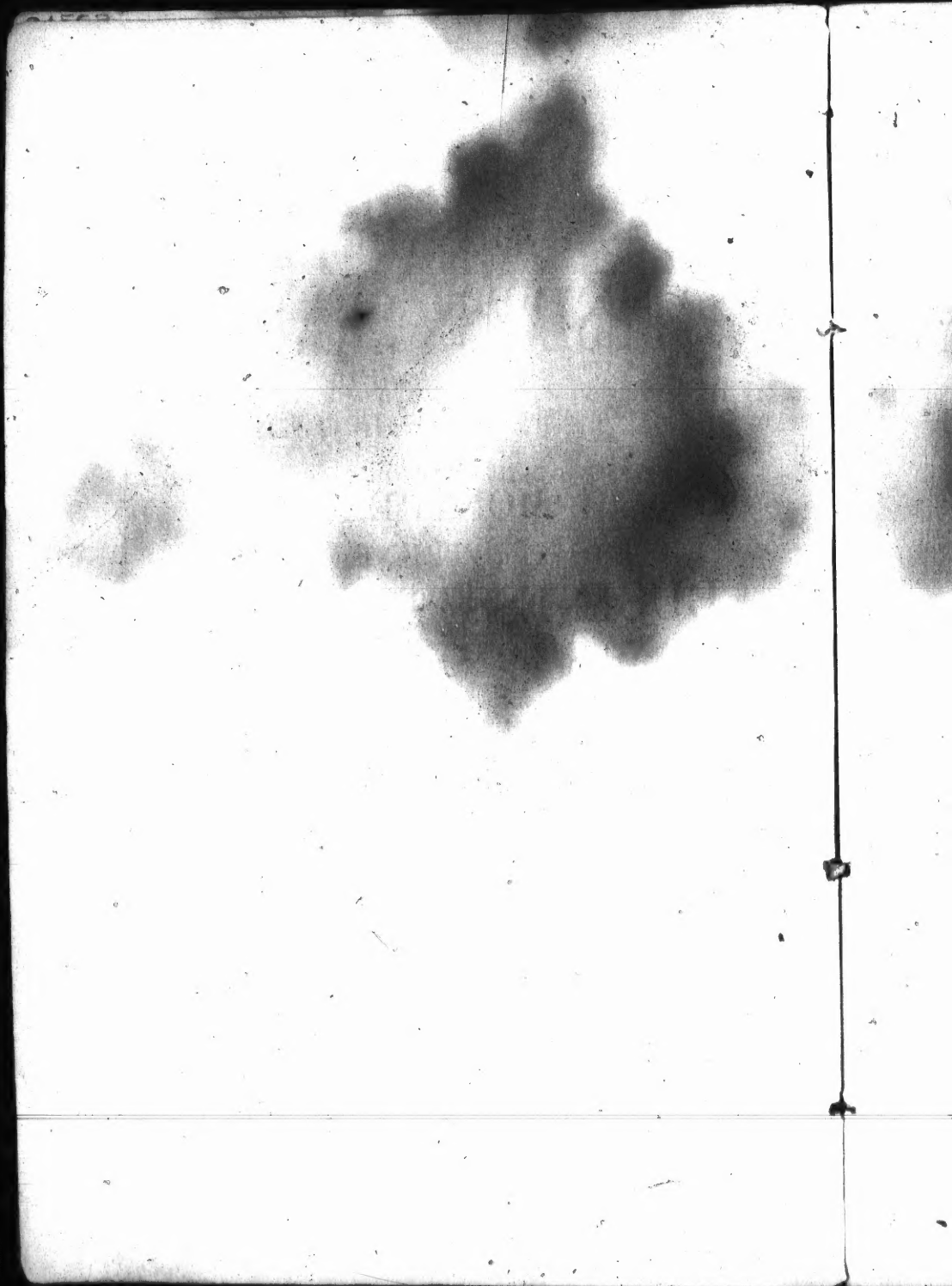


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MONTREAL
BUSINESS SKETCHES



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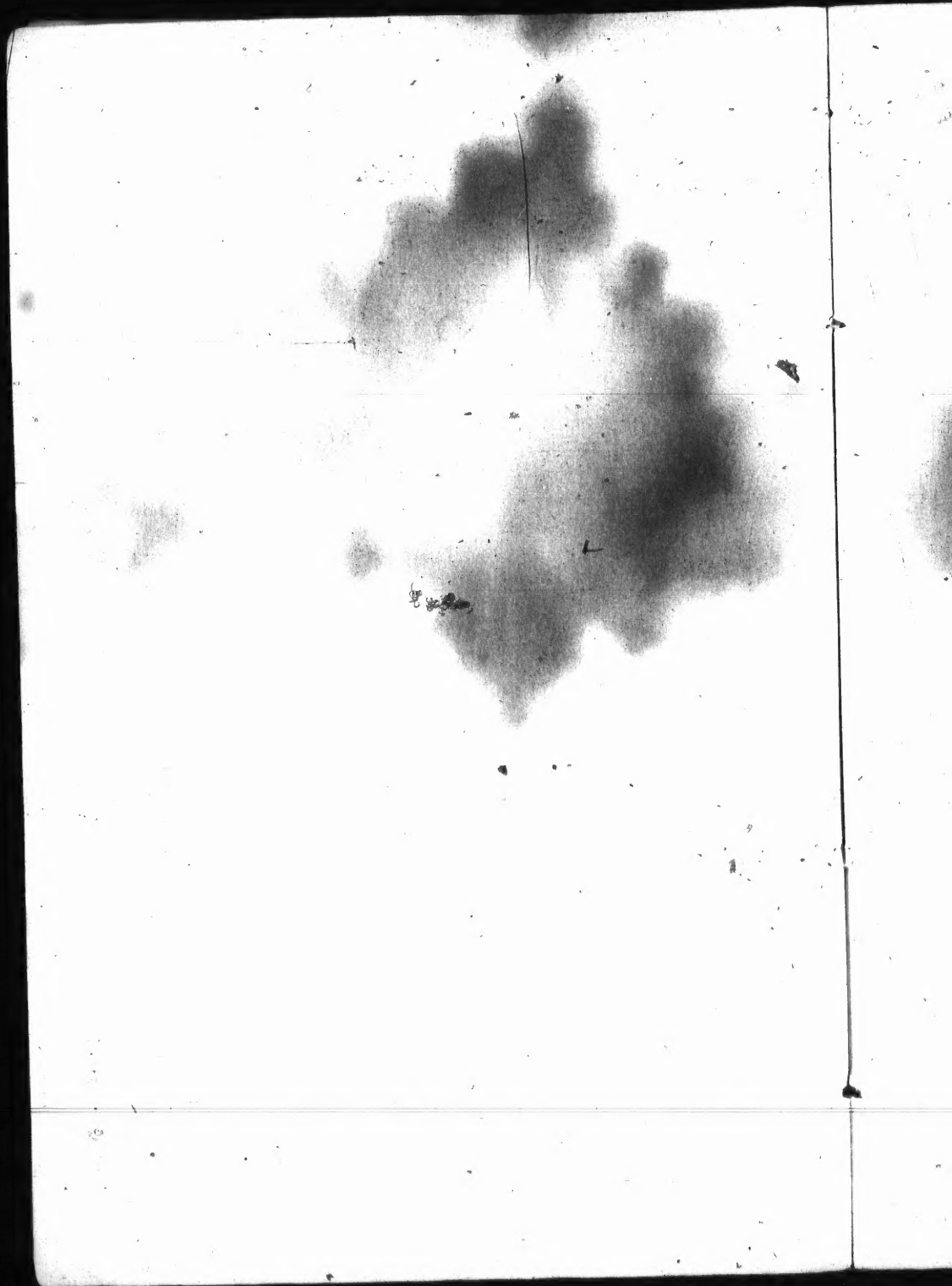
WITH A
DESCRIPTION OF THE CITY OF MONTREAL,
ITS PUBLIC BUILDINGS AND PLACES OF INTEREST,
AND THE
GRAND TRUNK WORKS
AT
POINT ST. CHARLES,
VICTORIA BRIDGE,
&c., &c.,

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1864.



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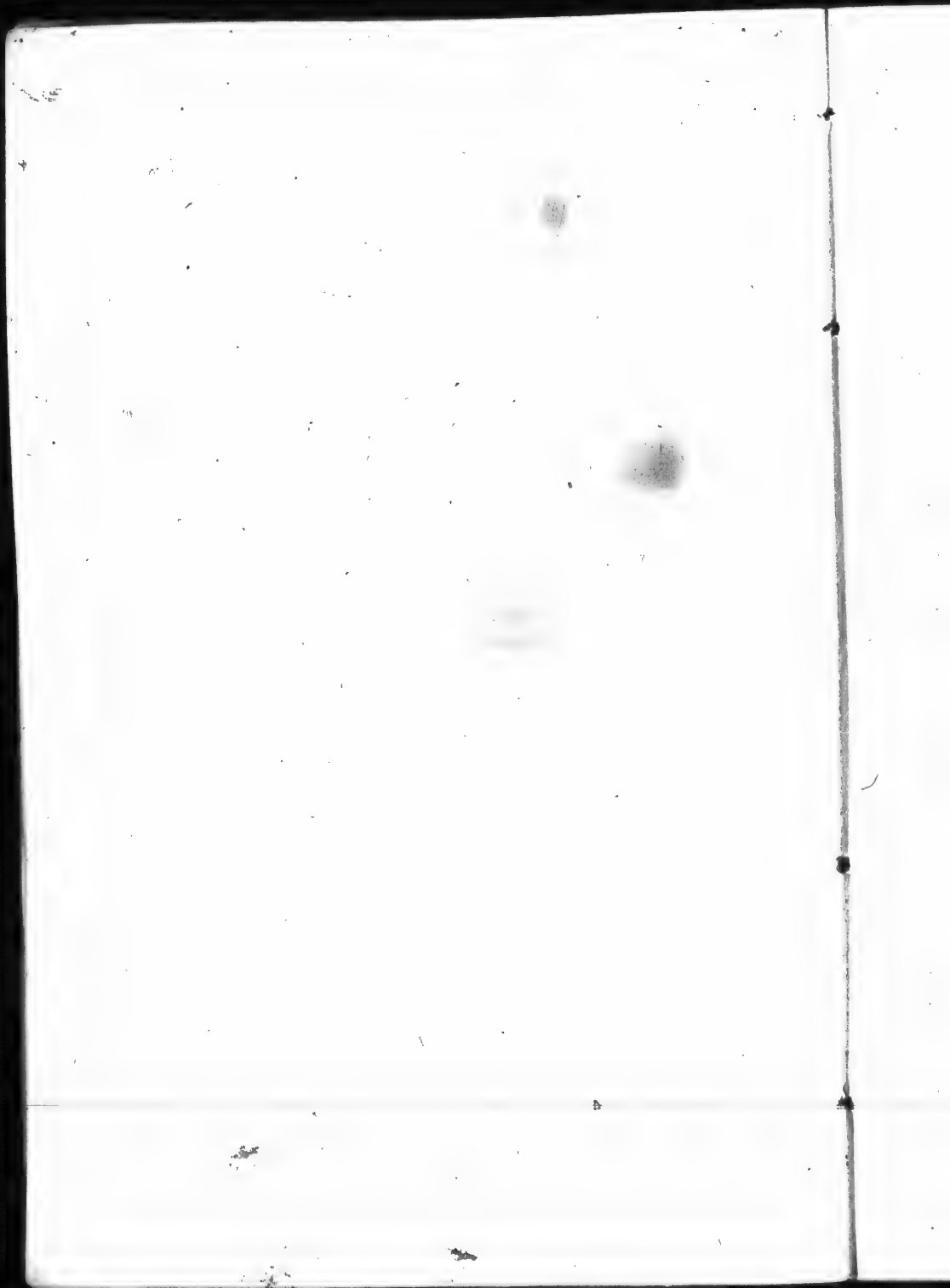
INTRODUCTION.

The object of the Canada Railway Advertising Company in preparing the "Montreal Business Sketches," is twofold. In the first place, the Publishers desire to set before the Public a brief but impartial description of the establishments and manufactures of its patrons; and, in the next place, they aim at acquainting this community, as well as the people of the Province, with the facilities the city possesses for producing successfully, and to any extent, whatever is required in the various departments of trade, commerce, and the arts. It is but a very short time ago that Montreal was compelled to depend upon the workshops of other countries for nearly every mechanical appliance of which she stood in need. Fortunately, however, this state of things has passed away, and, at present, not only is this city independent of almost all the staples of foreign industry, but is able to make, as well as to export, what she was formerly obliged to import and to consume. This is a fact as creditable to our manufacturers, as it is gratifying to

all who have at heart the prosperity of local enterprise; the publishers hope, therefore, that the accompanying sketches will serve to convey a wider conception than has hitherto prevailed, of the rapid advancement Montreal has made in those industrial pursuits, which conduce not only to the development of the resources of Canada, but also add to her own wealth and welfare. It is not necessary now to speak of the physical and geographical advantages which Montreal enjoys, and which, in conjunction with the energy and efforts of her business men and manufacturers, have raised her to the proud position of commercial supremacy to which she has now attained.

But it may be in place to mention, that while art and nature combined have given powerful and indispensable impetus to the progress of Montreal, the people themselves have not been slow to improve their opportunities; and to welcome and support every new branch of industry established in their midst, and every legitimate undertaking, however unheralded or unknown. The latter assertion is amply borne out in the success that has attended the exertions of the Canada Railway Advertising Company. And while the Company gratefully acknowledge the encouragement they have received, they have substantial reasons to believe that their efforts have not failed to rebound to the benefit of their patrons. The "sketches" have been prepared with

accuracy, and the descriptions are the result of direct personal inspection and inquiry, and are impartial accounts of what was seen, heard, and ascertained in the different establishments and manufactories which were visited. The Company trusts that the reader of these sketches will find in perusing them indubitable proof that our city possesses within itself the energy, enterprise, and self-reliance which always combine to make communities great and prosperous. And if the present publication tends to the advantage of its patrons, and assists in disseminating a better idea with regard to the manufacturing and commercial capacities of Montreal, and the resources of Canada at large, then the Company will have received abundant recompense for its time and labour.



MONTREAL.

The City of Montreal is situated on the Island of the same name ; and this Island lies at the mouth of the Ottawa River, where it joins the St. Lawrence. The Ottawa River, flowing from the North-west, makes the circuit of the Island, forcing the St. Lawrence to the South side ; and the waters of the two great streams remain separate for a distance of some eighty miles. Montreal, the largest and most flourishing city in British North America, stands at the base of Mount Royal. This mountain, from which the City derives its name, is clothed with trees to the summit ; and its slopes are studded with villas and mansions, built in different styles of architecture, but all of them attractive. The view from the Mountain is beautiful. The City, with its spires and public edifices—the St. Lawrence, with its forest of masts—the Victoria Bridge, losing itself, as it were, in the distance of the opposite shore—can all be seen from the Mountain, and more can be taken in at a glance than it would require hours to describe. On a clear day, too, the outlines of the far-off hills of Vermont can be descried against the horizon. Altogether the scene to be witnessed from the summit of Mount

Royal, may be described as one of surpassing loveliness. The drive round the Mountain, a distance of about nine miles, is one which, for beauty of scenery, is difficult to be excelled.

The City Water Works (two reservoirs) are situated at the base of the Mountain; are excavated out of the solid rock, and are 205 feet above Montreal Harbour. They have a water surface of about 90,000 square feet, and contain fifteen millions of gallons: their depth is twenty-five feet. The water is conveyed from the St Lawrence, near the Lachine Rapids, a distance of about six miles. The aqueduct terminates in a capacious basin situated in the outskirts of the city; and here there are two enormous wheels which pump the water up into the Reservoirs. The wheels can fill the Reservoirs in seventy-five hours' pumping; besides providing for the supply of the city at the same time. The works were begun in June, 1853; the first water was pumped into the Reservoirs in September, 1856. The cost of the works, including everything, was \$1,500,000

On approaching Montreal by water there are three objects that attract the attention of the stranger or traveller; these are—the Victoria Bridge, the Bonsecours Market, and the Wharves.

The Victoria Bridge rests on twenty-four massive stone piers; and its entire length is nearly two miles. It is estimated that in its erection 250,000 tons of stone, and 7,500 tons of iron have been used. The centre span is 330 feet in length: and there are twelve spans on each side of the centre one, each of which is 242 feet long. The length of the abutments is 242 feet each. The height of the centre of the Bridge above the summer level of the St. Lawrence is 60 feet: from this there is a descent to either end at the rate of 1 in 130. The contents of the masonry

amount to three millions of cubic feet ; and the work in question is of the most massive and enduring description. The following are the dimensions of the tube through which the trains pass in the middle span, viz.: 22 feet high, 16 feet wide ; at the extreme ends 19 feet high, 16 feet wide. The total cost of the work is about seven millions of dollars.

The Bonsecours Market, so called after the Church of Notre Dame de Bon Secours, in its vicinity, is the principal market in the city. The lower part of the building is devoted to the purposes of trade: the upper portion contains the City Council room, the Mayor's office, and the various other offices connected with the Municipal Government of the City. In the East wing of the building is a large concert-room capable of accommodating 4,000 persons. The Bonsecours Market has a front of three stories on St. Paul Street. It is a magnificent building in the Doric Style, and cost about \$300,000.

The Wharves of the City are built of solid masonry: they are nearly two miles in extent, and are unsurpassed by any on the continent of America.

The following is an enumeration of the principal public buildings in the City ; a visit to any of which will repay curiosity :

Court House, Notre Dame Street. Built of cut stone, and in the Ionic style. Ground plan, 300 by 125 feet ; height 76 feet.

Nelson's Monument, is situated on Jacques Cartier Square, nearly opposite.

In Notre Dame Street, a little beyond the Court House, and on the opposite side, is the old Government House where the French Governors held their levees and transacted business. It is now converted into the Jacques Cartier Normal School.

Montreal Exhibition Building, is situated on St.

Catherine and Cathcart Streets. The dimensions of the nave are 84 feet on St. Catherine and Cathcart Streets, with a length between these streets of 184 feet. The two transepts are 60 by 20 feet. The frame-work of the building is iron, enclosed in brick. Two galleries, twenty feet wide, extend all the way round the interior of the building.

The Museum of the Natural History Society is situated on Cathcart Street, and is contiguous to the Exhibition building.

In Great St. James Street, are the following public buildings:—Bank of Montreal; City Bank; People's Bank; Molsons Bank; Bank of Upper Canada; Commercial Bank; Ontario Bank; City and District Savings' Bank; Bank of British North America; Post Office; Mechanics' Institute; Mercantile Library Association; Colonial Life Assurance Office; European Assurance Society's Offices; Printing House Building, etc.

The Merchants' Exchange is situated on St. Sacrament Street, and so are the offices of the Montreal Telegraph Company.

The following are the different religious edifices:

PROTESTANT—Christ Church Cathedral, St. Catherine Street. This is a beautiful building, and is erected in the cruciform style. Length, inside, 187 feet; width of nave, 78; transept, including tower, 99 feet; height of tower and spire, 224 feet. In the tower there is a magnificent peal of bells, and a splendid clock.

St. George's Church, St. Joseph, Street, near McGill.

St. John the Evangelist (free seat church) corner of St. Urbain and Dorchester Streets.

St. Luke's Church, corner of Seaton and Dorchester Streets.

St. Mary's Church, Hochelaga.

St. Stephen's Church, Dalhousie Street, Griffintown.

St. Thomas Church, (Garrison,) corner of Voltigeurs and St. Mary Streets.

Trinity Church, Gosford Street, facing Champ de Mars.

PRESBYTERIAN.—American Presbyterian Church, corner of Victoria Square and Great St. James Street.

Canada Presbyterian Church; Cote Street.

Canada Presbyterian Church, corner of Chenneville and Lagauchetiere Streets.

Canada Presbyterian Church, St. Gabriel Street.

Canada Presbyterian Church, St. Joseph Street West, between Seigneurs and Kemp Streets.

French Canadian Presbyterian Church, (Church of Scotland,) Dorchester, between St. Urbain and St. Charles Borromeo Streets.

St. Andrew's Church, (Church of Scotland,) Beaver Hall Hill.

St. Paul's (Church of Scotland,) corner St. Helen and Recollet Streets.

WESLEYAN.—Wesleyan Chapel, (Centre,) Great St. James Street.

Wesleyan Chapel East, Lagauchetiere Street, Quebec Suburbs.

Wesleyan Chapel West, Griffintown.

French Canadian Wesleyan, Desrivieres Street.

French Evangelical Church, corner Craig and St. Elizabeth Streets.

BAPTIST.—Baptist Church, First, head of Rade-
gonde Street.

Baptist Church, Second, 38 Great St. James Street.

ASSEMBLY OF CHRISTIANS.—Nordheimer's Hall.

New Jerusalem Church, Dorchester Street, opposite High School.

New Connexion Methodist (West,) Dupre Lane.
New Connexion Methodist Church (East,) Panet Street.

CHURCH OF THE MESSIAH, (Unitarian,) corner of Beaver Hall Hill and Lagauchetiere Street.

ST. JOHN'S CHURCH, (German Protestant,) St. Dominique Street.

ZION CHURCH, (Congregational,) Radegonde Street.

JEWISH SYNAGOGUE, (English,) Chenneville Street.

JEWISH SYNAGOGUE, (German,) St. Constant Street.

ROMAN CATHOLIC.—Notre Dame, Place d'Armes.

This is a Church much visited by strangers, and greatly admired for its architectural features. The towers are 290 feet high. The North-east tower contains a chime of bells; while the North-west one has a bell weighing 24,000 pounds, the largest in America. The Church can accommodate over 8,000 persons.

St. Patrick's Church, corner of Lagauchetiere and St. Alexander Streets.

St. Peter's, corner of Visitation and Dorchester.

St. Mary's Church, St. Mary's College, Bleury Street.

St. Joseph's Asylum Church, Cemetery Street.

St. Joseph's Church, Richmond Street.

Cathedral, Cemetery Street.

Providence Church, St. Catherine Street, (East end)

Recollet Church, (built 1725,) Notre Dame Street.

Sisters of Mercy Church, Dorchester Street.

St. Ann's Church, McCord Street, Griffintown.

St. James' Church, St. Denis Street.

Bonsecours Church, St. Paul Street, (East end.)

The following are the principal Benevolent Institutions:—

General Hospital, Dorchester Street.

Hotel Dieu and St. Patrick's Hospital, off Sherbrooke Street.

Protestant Orphan Asylum, St. Catherine Street.

Ladies' Benevolent Institution for the relief of Widows and Half-Orphans, Berthelot Street.

The Mount Royal Cemetery, on the east side of the Mountain, is beautifully located, and is much frequented by strangers.

The McGill College, an institution deservedly celebrated, occupies a beautiful situation at the base of the mountain. It was founded by the late Hon. James McGill, who bequeathed a valuable estate and £10,000 for its endowment.

The Grey Nunnery is situated on Foundling Street, and is designed for the care of foundlings and the infirm.

The Champ de Mars, immediately in rear of the Court House, is the place where the troops in garrison assemble for review and parade.

We have now given a brief enumeration of the principal public buildings and places in Montreal and vicinity, in order that those at a distance, into whose hands this book may fall, may be enabled, should they visit this city and any of its manufactories, to blend the agreeable with the useful. We might mention many other attractions which this city possesses, were it not for the inexorable demands of space. We trust, however, that we have done enough to show that Montreal, besides being the great Provincial centre of manufactures and commerce, can claim, on account of her public buildings, the attention of the man of taste; on account of her charitable institutions, the attention of the philanthropist; on account of the beauty of her position, the attention of every one possessed of admiration, for what is pleasant and for what is picturesque.



MONTREAL BUSINESS SKETCHES.

THE CANAL IRON WORKS.

THOMAS PECK & CO.

These works, the property of Messrs. Thomas Peck & Co., are situated on the Canal, where they carry on an extensive business in the manufacture of iron, cut nails, and nail plate, as well as ship and railway spikes. The process of making nails involves more labour, and requires more powerful and complicated machinery than a person bestowing a casual thought on the matter would be led to suppose. The manufacture of a nail, the various manipulations to be undertaken before it is turned out perfected, are very interesting and deserve a brief description. As a preliminary step it is necessary to begin with the rolling mills, where, amid the crash of large machines, the roar and glare of furnaces, the iron is rolled into the required shape and thickness. There are four puddling furnaces, and two called heating furnaces, each attended by two men. The fires are kept up day and night, and the work goes on for the whole week, only ceasing on Saturday evening, when the furnaces are extinguished. Each of the puddling furnaces is charged with 450 pounds of pig iron, which remain exposed to the action of intense heat for about an hour and a half. During this time a workman, in the lightest possible costume, is engaged incessantly with a long bar of iron, which he thrusts through a small aperture in the door of

the furnace, in turning over the metal, and in exposing it in every position to the influence of the heat. To see these men, as if they were salamanders, or had skins endowed with the properties of the fire-repelling asbestos, engaged in toil a thousandfold more trying than the fabled labor of Vulcan and his Cyclops—to see them advance to within a foot or two of the fierce furnace, and gazing into an aperture as dazzling as the sun on a tropic noon-day toss about with iron bars, which they wield like wands, the heavy and flaming masses of metal—to see them tug and heave, while the sweat exudes from every pore like rain—to see all this is only to suggest the thought that every other species of exertion and endurance which men are called upon to exercise is little else than pastime. The iron, after it has remained in the furnace a sufficient time, is taken out and removed rapidly on a truck to a huge machine, named, most appropriately, an alligator squeezer, for in shape, in formidable jaws, and powerful teeth, it certainly resembles that animal. The workmen quickly place the burning mass, which is now without form, within the jaws of the alligator, in which the metal is turned and turned till it assumes something of a rounded appearance; the pressure is immense, so great, indeed, that at every snap of the diabolical looking jaws, flames leap out, and showers of red hot particles scatter themselves everywhere, like the scorchie of a miniature volcano. After the iron has been crushed into form, it is thrust under rollers, with something like grooves running round them, but narrowing as they approach the part where the metal comes out. The block or boulder of iron is pushed through each groove by a workman at either side of the rollers, who seizes it with a pair of huge pincers swinging from the ceiling. In about a minute or two the process is finished, and the mass of iron that, when entering the rollers was not over a foot and a half long, now comes out a bar between ten and fourteen feet in length, and from three to four inches in breadth. After this the bar, when sufficiently cooled, is cut into pieces, which are piled one over the other; then they are placed in two heating fur-

naces, and after a lapse of time, are taken to other rollers different from the ones just mentioned, whence they issue in the shape of long sheets of iron, about a foot in breadth. These plates are taken to a powerful pair of shears, where they are cut crosswise, and into the requisite sizes for nails of different lengths. These cuttings are next placed in two furnaces, are brought to a blue heat, and in this state removed to the nail factory, where they are cut by the machines into different sizes. In the factory, on the lower story there are eighteen large machines, attended by men, where the larger nails are manufactured. On the second story of this factory there are twenty machines, self-feeding, which cut shingle nails, ranging from an inch and an eighth, to an inch and three quarters. They are made of hoop iron, imported from England, the firm of Peck & Co. having no accommodation on their premises for the manufacture of hoop iron themselves. In the factory below stairs, two kinds of nails are made; they are known as the American pattern, which is flat-edged, and the Canadian, which is grip-edged; the former is preferred in Upper, the latter in Lower Canada. In the spike factory there are two large machines, for the manufacture of ship and railway spikes, averaging from five to ten inches in length, and of proportionate thickness. A stream of water is continually directed upon the machines; the thickness of the bars that are used in making the spikes, which are red hot when cut, render this necessary in order to keep the instruments of proper hardness. After the nails are cooled, they are packed into barrels, and thus are sent all over the Province. The motive power of the whole machinery is water, supplied by the canal. The water drives a large wheel, deep below the floor of the factory; motion is thus communicated to a large balance wheel of twenty-two tons in weight, which revolving with extreme velocity, drives all the machinery in the factory. There are three separate water wheels, one for the rolling mills, one for the spike machines, and one for the nail-cutting machines. The Canal Iron Works give employment to one hundred men, and the number of nails manufactured

yearly is something enormous. The machinery employed is of the most improved description, and in every way adapted for the purposes intended. The number of nails consumed in Canada is very large. A great deal might be said about this fact, as it argues the extension of buildings, &c., and the consequent increase of population, and therefore the rapid development of the country. But this cannot be effected in the present article, whose only object is to show the successful establishment, as well as the magnitude of one particular branch of our home industry.

LYMANS, CLARE & CO.

The Drug establishment of which Messrs. Lyman, Clare & Co. are successors, was commenced by the Paternal Uncles of the Lyman Brothers. in 1803, one of whom, the late M. J. Lyman, had received a collegiate education and was a Doctor in Medicine.

At the date referred to there was but one other medical store in the city, the proprietor of which, Dr. Brown, did a counter business in connection with his practice.

The establishment of the Messrs. Lyman was situate in St. Paul Street, directly opposite to the *Old Market*, the site which is now occupied by the Custom House and garden. This spot was then one of the busiest of this narrow, crooked, busy street; nearly all the trade of the town, wholesale and retail, being carried on in the stores and warehouses in it, or its immediate vicinity. The drugs, chemicals, dyes and colors which formed the bulk of their stock were imported by the Messrs. Lyman from London houses, and by careful selection and attention to the wants of their customers the establishment, though small in its beginning, was very successful. The late Mr. William Lyman joined the establishment as a junior clerk and apprentice in 1807, and in conjunction with Mr. William Hedge succeeded to the business, under the style of Hedge & Lyman, in 1819. Mr. Hedge retired in 1836, when Messrs. Benjamin and Henry Lyman were admitted to partnership,

under the name of William Lyman & Co. In 1855 the senior partner, Mr. William Lyman, retired, and Mr. Alfred Savage became a partner, the style of the firm being changed to Lymans, Savage & Co.; and upon the retirement of Mr. Savage, in 1860, Mr. W. H. Clare, who had held a responsible and confidential position in the house for several years, was admitted to a partnership, his name being substituted for that of the retiring member. During the period under consideration the house had extended its sphere of operations, and had formed business relations with merchants and druggists in most of the principal towns in the Province. At different periods several branch establishments were formed, in Quebec, Kingston, Bytown, Toronto and London. In process of time, however, these were gradually withdrawn, with the exception of the branch at Toronto, which was commenced about 1832, under the management of Mr. J. W. Brent; upon the retirement of Mr. Brent several changes in management occurred, associated with which were the names of the late Messrs. T. J. Farr and Richard Kneeshaw, and subsequently that of Mr. Wm. Elliot. In 1860 the latter was admitted to co-partnership under the style of *Lyman, Elliot & Co.* Under the present management the business of this branch has been greatly extended, and is now only second in importance to that carried on at the parent establishment in this city, which it is now proposed to notice.

Situated No. 226 St. Paul Street, the building extends as far backward as Capitol Street. In height, it is four stories in front, and in the rear five. But large as are these premises, they are insufficient for the purposes of the trade of the firm, who have three buildings in different parts of the city occupied as stores; the latter places, however, are rented, while the establishment in St. Paul Street, as well as the mills on the Lachine Canal, are the property of Lymans, Clare & Co. The basement of the store in St. Paul Street is the coopers' package department, and also for the stowage of miscellaneous articles. Here orders are filled as far as re-

gards packages for delivery and shipment, and here also goods are received. In this place there are several large metal tanks for holding oils; and there is also an ingenious hoisting platform apparatus, constructed by G. Brush, Esq, Eagle Foundry, which elevates goods to the highest parts of the building. This improved platform hoisting machine was first employed by one of the members of this firm for a store occupied by Messrs. Johnston & Co., in St. Peter Street. On the second flat, in rear, is the chief warehouse—Clerks' office, to which all orders, from the office proper, are brought. Here is the miscellaneous packing department; and in the vicinity, is a place where women are kept constantly employed in the washing of bottles. Here are tanks also for varnish and castor oil, and a bottling counter, the tanks being supplied by a pipe from the filtering room in an upper story. The third flat contains the order room proper; here is a large number of stock casks and tins, for storing away the different articles used in the trade, and any quantity of soaps, &c., as well as patent medicines. On this flat, also, are the general office, private office and sample-room; in this latter place every article for sale in the store is to be found represented—in fact it is an epitome of the trade. The fourth flat is principally devoted to colors, which have to be kept separate; here also there is a room for patent medicines in stock, for confectionery, and for seeds. There is a castor oil filtering-room, with a capacity of forty filters; after passing through these filters the oil falls into tubes, and thence is conveyed to the proper reservoir below. The trade done by the firm in this one article of castor oil is great, as may be judged from the fact that they dispose of some seventy-five cases every three months, each containing twenty gallons. This flat also contains a work room for females, and a room appropriated exclusively to the preparation of tinctures. The fifth flat contains a vast quantity of medical glass and earthenware; while the attic is devoted to the reception of light goods, roots, empty packages, stoneware, jars, &c. To describe the shop of Lyman, Clare & Co.

would be a task of too much difficulty ; but if variety of goods, neatness, order and handsome appearance count for anything, then it has no superior.

THE FACTORY ON THE LACHINE CANAL

Has a frontage of 80 feet, and a depth of 130 ; it extends from the Canal to the River St. Lawrence, the part facing the former being five stories, and that bordering on the latter being four in height ; as a whole, therefore, the factory may be considered an important as well as an extensive one. The first flat of the factory in rear, is appropriated to the manufacturing of putty and paints, the operations being performed by powerful machinery, immense stones like those used in a large flour mill entering prominently into the operations. Here also is made, from the refuse of the oil, the gas required for the establishment. On this story there is also a powerful force-pump, capable of throwing water on any part of the building, in case of fire. The second flat is the mill proper. In this place the grinding of gypsum is carried on ; a softer kind of this mineral is prepared as manure ; a harder species is converted into calcined plaster, for stucco workers. The gypsum is procured from the Gulf of St. Lawrence and the coast of Nova Scotia and conveyed thither in barges. The machinery for grinding the gypsum consists of two runs of stones and powerful metal mills, able to grind thirty barrels per hour. There is one run of stones for the grinding of various kinds of spices. In a separate portion of this flat, a part of the operation of manufacturing linseed oil is carried out. The seed first of all passes into a sieve, where it is cleaned of all the grosser admixture of seeds, stones, &c. ; then it is conveyed by an elevator to another part of the building, over-head, where the sand and dust are extracted, in what is called a revolving screen. Again the seed descends to the second flat, in which place it is ground three times by cast-iron rollers, in order to crush the kernel. Some fifteen minutes suffice for this process. From the crushing mill the seed passes to the

mullers and scrapers, where it is prepared for the steam table, situated in the story above; the heated meal is now put into bags between squeezers, and placed in powerful presses, the oil from which is conveyed by pipes into reservoirs, in a contiguous building. Fifteen minutes suffice for this last operation, at the end of which the cakes are removed from the presses, stripped, trimmed and taken away to the storehouse, where it is seasoned for the home and foreign markets, and where it finds a ready sale as food for cattle. There are four of the presses just mentioned—two vertical and two horizontal—but the power they exert is the same. In the same flat there are eight drug mills, comprising machines for grinding drugs of all descriptions. There are also a number of spice mills; all these machines have to be enclosed in tightly-fitting wooden cases, in order to prevent the escape of the impalpable powder, which if allowed to be expelled would prevent the workmen from continuing their labors. The fourth flat is divided into two departments, in one of which linseed, in the other timothy and clover seed are cleaned. Here, as in all parts of the factory, water is the motive power; and by simply turning a screw that lifts the flood-gates, the machinery is put in operation. As before mentioned, the oil cisterns are outside the mill proper. There are two of them, each divided into two compartments, the whole containing four thousand gallons. In the basement between this building and the one facing the canal, there is a machine, cylindrical at the ends, but approaching towards a cone in the centre, and containing several knives; the purpose to which this apparatus is applied is cutting dye-wood. A log, placed on a horizontal bed, is forced against the knives, which, chopping it almost across the grain, slice it off in small chips as easily as cheese might be shred up with a sharp cleaver. Five tons of such material as logwood can be thus reduced in the space of ten hours. The mill store, fronting the Canal, is five stories in height, excluding the basement, and is 80 feet long by 65. The first story contains paints, chalks, oils, glass,

putty, &c.; the second gypsum, dyè woods, calcined plaster, &c.; the third for the packing up of oil cake for market, also for the depositing of spices and drugs. The fourth story contains a general assortment of heavy and light drugs and colors. The fifth flat is used for the storage of flax seed, most of which is grown in Canada; and here also is powerful machinery for hoisting from vessels discharging at the Canal their heavy cargoes. On the opposite side of Mill Street is a building stretching to the river's edge. A pipe from the oil cistern already mentioned, crosses the road and conveys the linseed oil into a number of vats, where it remains for a brief time to allow the sediment to collect at the bottom; after this is effected the oil is pumped into a series of boilers in a fire-proof building, where it is boiled and purified by temperatures ranging from 150 to 600 degrees. In this latter process the greatest caution is necessary. The walls of the premises just mentioned contain sheds for empty cases, for the storage of acids, for the manufacture of the tinware used in the factory, a carpenters' and a coopers' shop. These mills produce 60,000 gallons of oil and 500 tons linseed cake annually, but we learn that they could yield a much larger quantity if the production of flax seed were extended in the Province. Taken as a whole the premises are well fitted for the business to which they are made subservient, and bear a full share in the testimony to the progress of the manufactures of the city of Montreal.

MONTREAL TYPE FOUNDRY.

There are few who, although desirous of learning something about the matter, possess any knowledge concerning the making of types—those tiny atoms which go to make up the world of information. The subjoined article will endeavor to supply, on this subject, a few facts, which, it is hoped, will give the reader an idea, however imperfect, of the manner in which the process of type founding is carried out. The only type foundry in this Province is that owned by Mr. Palsgrave, corner of Le-

moine and St. Helen Streets, Montreal; and here the art, in all its branches, may be witnessed in full operation. On the top story of the building, the metal undergoes the first process. Here there is a large caldron, into which are thrown lead and other metallic ingredients, the latter being intended to give the first-mentioned substance a tenacity foreign to itself alone. Those metals, when thoroughly combined are run into pans, and as soon as cooled the amalgamated mass is taken below to the next story to be used in the casting of the type; for this purpose there are some nine or ten machines, of which the following description may convey a kind of impression. The type-casting machine is furnished at the top with a small pot, where the metal is kept melted by a little fire immediately underneath. In this pot is a cylindrical plunger, which pumps the metal through a small aperture on the outside of the pot or basin. A crank communicates with the plunger; when the crank is turned by the man who works the machine, the pump, by its peculiar action, draws the molten metal from the pot and propels it through a small nipple. Directly opposite this nipple is the mould, closed at the opposite end by the matrix of the type, and into this the metal is projected. The type is formed upon the instant, and cools as soon as formed; then the machine expels it, and it slides down an inclined plane to a box at the side of the machine. The casting of type is performed so rapidly that 200 small type can be made within a minute. The machine itself is a very ingenious mechanical contrivance, but so numerous are its parts, and so complicated its functions, that it is impossible to understand it fully without seeing it in operation. After the type is cast there remains attached to the extremity a little piece of metal, technically called a "jet." These jets are broken off by boys in the most rapid manner imaginable, and without the spectator being able to discover by what manual process it is performed. The type is next given over to a number of girls, who sit round a circular stone table. These young women rapidly pick up a type each, and rub it upon the table, in order to smooth the sur-

face. The dexterity with which the types are thus manipulated is astonishing; it must be understood, however, that the rubbing process is confined in this instance to the body of the type. After this the types are taken to a young woman, whose business it is to smooth only those letters the face of which projects over the body. Then they are "set up" by a girl, preparatory to being dressed by a workman. This process consists in the type being placed in a row upon a bench, and smoothed to a uniform accuracy; here also is grooved out the remnant of the jet broken off by the boys, which leaves the type of a perfect and uniform height. Another workman sorts out whatever type are in the slightest degree defective. They are then packed up in papers in square shape, and are now ready for being sent to the printing office. In addition to the casting of type, the foundry turns out in great numbers what are known in printing offices as "leads," "brass rules," and other articles, the use of which can only be properly understood by professional compositors. On the third story is the mechanics' room, under the charge of Mr. Drummond, and here is constructed every machine used in the foundry; here, also, the processes of stereotyping and electrotyping are carried on. This shop contains a vast variety of tools, all of which are found to be necessary, for in reality there is no art which requires such skill and mathematical accuracy. There is one operation which requires the utmost carefulness, namely—making the matrices in which the type is cast. These matrices are of copper, and the die is cut towards the end. The foundry keeps stored away in an iron safe about 10,000 of these matrices, the value of which is about \$20,000. The second story of the building contains the ware-room, where the type is deposited ready for market; also inks, printing presses, &c., are here packed away. The office is also on this flat. The foundry of Mr. Palsgrave, taken as a whole, is complete in every department, and the reputation which his manufactures have obtained, extends beyond the Province. The foundry keeps always employed 15 young women and 20 men and boys.

THE STARCH WORKS AT EDWARDSBURGH, CANADA WEST.

The Starch Works at Edwardsburgh, Canada West, possess the merit or peculiarly of constituting the only establishment of the kind in the Province; and, such being the case, are entitled to a brief description. The works are conducted by Messrs. Benson & Aspden, and the substance they manufacture finds its way not only over the British possessions in North America, but to the English market, where they found it necessary to establish several agencies. The buildings, as viewed from the river, present an imposing appearance, and are the chief objects of architectural interest about the village of Edwardsburgh; this latter place, it may be added, received its name out of compliment to the father of the Queen, Prince Edward, Duke of Kent, and is a locality which continues to improve rapidly. The works, which contain in addition, premises for the manufacture of "Prepared Corn," as observed from the water side are five stories in height, with a grain elevator displaying its towering proportions far above the roof. The machinery in the interior is worked by water power, the motive agent coming from the canal adjoining, whence it issues through eleven openings each of which is four feet wide by six feet in depth. These channels supply the flume or mill-head, a powerful body of water, in depth ten, and in width twenty-five feet. This flume has a fall of 8½ feet, and possesses a driving capacity of about 900 horse power. When this stream reaches the starch factory, it propels three large wheels. A building, distinguished by a lofty chimney, and apart from the factory, contains a steam boiler equal to the driving of an engine of forty horse power; the steam supplies the building with heat in winter; and every day in the year gives, to a number of closed chambers, a temperature varying from 120 to 160 degrees. The fifth story of the building receives the corn, which ascends through the elevator from the steamer that comes alongside. The granary can contain 35,000 bushels of corn, which, filled in the fall and emp-

tied in winter, represents only half the yearly supply. Now, to descend to the bottom of the factory, and certain hatchways being lifted up, water is seen in tumultuous action below, and is heard howling and seething as if a hundred leviathans in the dark depths were making the illimitably powerful element to "boil like a pot." The sight recalls to mind two lines in Childe Harold's description of the Falls of Volturno:—

"The hell of waters—how they howl and hiss,
And boil in endless torture."

In this Tartarian reservoir, four wheels, four feet in diameter each, are concealed from observation, and are made to work horizontally, having respectively a capacity amounting to forty-horse power. The stream, after driving these wheels, falls into the canal whence it issued. The water is pumped from these reservoirs through a huge pipe, and then it is filtered through means of beds of sand; and from the tanks into which it percolates, is brought up by means of pumps and distributed into various receptacles. The corn, when about to be made into starch, is sent down from the granary, where it is washed and left in baths, and undergoes a certain chemical process only known to the proprietors; there is, however, no fermentation. After having laid a sufficient time in these baths, the corn ascends to the fifth story once more, where it is dried for grinding. It descends in three streams to the fourth floor, and falls into circular iron cases, in each of which is a mill stone, and coming thence descends into circular vats, five or ten feet high and six feet wide. These vats are supplied with filtered water, and in each there is a vertical shaft, with a wheel and flange attached. This machinery agitates the whole of the contents, and syphons remove the liquid which now holds the starch. The mass is subsequently transferred into a series of tanks, and the rejected matter is removed for the purpose of fattening cattle and pigs. In order to purify the starch it is removed by mechanical travellers from floor to floor, and strained through silk cloths (costing four dollars a yard), the cloths being cleansed daily in pure water with the best of soap. On

the second or third floor there are ten or twelve tanks, to which the liquid starch is conveyed. These tanks are some four feet deep, ten long, five wide at the top but narrower towards the bottom; and there is a row of plugs in the end of each for the purpose of allowing the liquid to be drawn off the precipitated starch in a gradual manner. Filtered water, to a depth of a foot, is brought upon five inches of this sediment, which, having developed itself into a hard and consistent substance, is cut in pieces with scooped shovels. Again being reduced to a liquid, it is drawn off and runs to an apartment below, where the temperature is high; here there are troughs eight inches deep, eight wide, and about six feet in length; the starch is strained into these boxes by means of pieces of silk cloth. Two inches of sediment are left; more fluid is strained, making the stratum four inches, and two of these doubled strata laid together, making eight inches, are cut to form cubes of that size. Each of the cubes is wrapped separately in blue paper, carried to one of different small rooms, arranged on shelves, and crystallization effected by means of heat and currents of cold air, supplied by fans worked by machinery. When the cubes are removed and unpapered, they fall into crystals. In another room boys are to be seen preparing paper and placing the starch in packages, each package being neatly labelled. The "Prepared Oorn" is also put up in packages, and labelled with directions how to use it in making puddings, pie crusts, &c. The different kinds of starch manufactured are—Canada Satin Face Starch, Canada Silver Gloss Starch, and Pure Starch, white and blue. These are guaranteed the best that can be made, and have taken the Prize Medal at the London Exhibition of 1862, and every other Exhibition where they have been shown, in Montreal, Toronto and elsewhere. But the most substantial proof of the superiority of the starch is, that wholesale consumers in England pay a much higher price for it than for any other produced in the world. The factory can turn out 6,000 pounds daily, and the boxes to contain this require annually in their construction 500,000 feet of lumber. The

vats, altogether, are 80 in number, with a capacity of about 200,000 gallons. The saw mill has a circular saw of five feet in diameter, and can make 10,000 feet of lumber in twenty-four hours; there are four other smaller saws. There are also a splitting machine, a machine for tonguing and grooving boards and flooring, a Daniel's planer for planing square timber, turning lathes, boxing machines, &c. The buildings are of brick and substantial in construction. The starch factory is supplied with a reservoir at the top, and thirteen hundred feet of pipe conveys water to every part of the building, so that a fire could be instantly overpowered. The buildings were commenced in 1858 and finished in 1860, taking nearly two years in their construction, and with the flume head, gates, &c., cost over \$100,000. About fifty men and boys are constantly employed on the premises. Taken as a whole, these premises, for the purposes intended, could not be surpassed, for every facility that science could offer for the manufacture of starch is here at hand. And it should be a source of pride to every one who takes an interest in the industrial development of this country, and who sees this department make itself known and honored so widely, that there exist among us the Starch Works of Edwardsburgh, Canada West.

EAGLE FOUNDRY.

The Eagle Foundry, Mr. George Brush, proprietor, is a very extensive establishment, situated on King Street, running back to Queen Street, which passes through it, and on the opposite side of which is the boiler shop. The premises cover about a block and a half. This is the oldest foundry in the city, being established in the year 1823. It was first built and owned by John D. Ward & Brothers. In the year 1839 Mr. Brush became a partner, and afterwards, in 1845, sole proprietor. The manufactures of the Foundry may be said to consist chiefly of steam engines, boiler work and machinery generally. The engines and boilers of some of the best and fastest boats on the river were made at this estab-

lishment. The names of the old "Quebec," the "Passport," the "Prince of Wales" on the Ottawa, and the tug boats "James Mackenzie" and "Caledonia" (formerly the "Alliance"), may be cited in proof of the above statement. It may also be further added that in the year 1840 this Foundry furnished the engines, 266 horse power, for Her Majesty's frigate "Sydenham." At the present time Mr. Brush is engaged in building, for a new steamer for the Royal Mail Line between here and Upper Canada, a very large and powerful engine. The vessel, which is of iron, Clyde built, is being erected in the city this year, the plates being sent out from Scotland. The steamer, however, will not commence running until next year. The making of engines is the principal business of the Foundry, and of late years it has turned out a great many stationary ones. Mr. Brush also furnishes all kinds of machinery for factories. There are so many facilities for the purpose in this Foundry, that engines of ordinary sizes can be constructed at very short notice. There are six distinct shops, namely—the pattern, blacksmith, fitting, moulding, boiler, and brass foundry. The concern employs between 60 and 100 hands. It would seem that during the past six years business has not been so brisk as at the present time. Mr. Brush, just now, is constructing a good deal of mining machinery for the Eastern Townships; also, the machinery for the new and peculiar grain elevator of Cumming & Farish, situated on the Canal Basin. Mr. Brush has received two diplomas and two medals, at the Exhibition held in this city during the visit of the Prince of Wales. The horizontal high pressure engine which drove the machinery at the Exhibition was made in this Foundry; it is at present used to work the elevating machinery in operation in Hon. John Young's stores, Wellington Street. Mr. Brush can build high pressure engines equal to, and cheaper, than any imported from the States; and generally keeps two or three on the premises for sale. He constructs engines and boilers with much care and of the best material. He has made some tobacco machinery, and constructed

machines for the manufacture of railway spikes, the same afterwards being sent to England. The Eagle Foundry is capable of turning out a great amount of work if necessary, and that of good quality. It would seem that engines are made far better and much more powerful at the present time than they were thirty years ago; the increased cost, it would appear, bears no comparison to the improvements that have been effected. It has already been noticed that there is an increased demand for steam engines springing up. The explanation is a gratifying one, namely—that the carrying trade from the West is increasing so fast as to necessitate the employment of larger vessels, and consequently more powerful machinery. Mr. Brush, in addition to other things, makes water machinery, architectural castings, steam pumps, bark mills, power presses, &c. It only remains to add that the Eagle Foundry has always borne the reputation of turning out work of the best description.

PHOTOGRAPHY.

If the encouragement of the fine arts is any indication, as it truly is, of the prosperity and advance in civilization of a country or city, Montreal has done much within the last ten or fifteen years to denote that her people are alive to the refining influences of art, and her prosperity has freely fostered its progress amongst them. As an instance of this we may refer, first, to the Photographic establishment of Mr. Notman, which from its modest commencement some seven or eight years ago, is now the largest in the Province. A short description of a recent visit may not be uninteresting to our readers. On entering, the visitor is shown into the reception rooms, a suite of four, the walls of which are completely covered with the finest specimens of the art, comprising portraits of celebrities, foreign and local, many of which are exquisitely finished in water colors and oil; here will also be found some very fine paintings

by Vicat, Cole, Deerman, Jacobi, Way, &c., with many choice proof engravings, which give diversity and add to the interest of the whole. There is also an interesting relic of the visit of the Prince of Wales to this Province, in a duplicate set of the Photographs presented by the Government to H. R. H., comprising views of the most noted points of interest in Canada, from the Saguenay to Niagara. The staff of artists employed in this establishment is now very numerous, yet in some of the branches the demand is ahead of their best efforts to supply. At the extreme right of the reception rooms are dressing rooms for ladies and gentlemen respectively, from which you ascend to the, what is commonly termed, operating room, on which Mr. Notman has bestowed the utmost attention, and the result is a room of admirable proportions, with a soft agreeable light, and furnished with many elegant and choice accessories. On the opposite side of the reception rooms, are rooms set apart for coloring and copying. In the second flat of the front building we found many engaged in printing, mounting, re-touching and pressing photographs, and were surprised to see the valuable and numerous sorts of apparatus and machinery required for the proper carrying on of such a business. In the flat above, printing by the solar camera is conducted, a most interesting process, by which from a small negative, often the same which is used to print the *cartes-de-visite* portraits, a photograph of any dimensions may be printed—full length, life size, or larger if necessary—with mathematical accuracy, and in the hands of a good operator, with a softness and richness to please the most educated eye. In this way many of the Imperial Photographs on the walls of the reception rooms were printed, and are worthy of special attention. On the same flat are rooms for keeping stock, for preparing paper, and for packing portraits going a distance. Mr. Notman has sent photographs to various exhibitions, and has always obtained the first prize, the last and most notable being that awarded by the jurors of the International Exhibition, London, 1862.

HOUSE FURNISHING AND BUILDERS' HARDWARE.

Messrs. Geo. Hagar & Co., who are largely engaged in the above business, occupy the premises 302 and 304 St. Paul Street. Mr. Hagar commenced business in 1836, in the building corner of St. Paul and St. Gabriel Streets, which had just been erected, and was then considered one of the best stores in St. Paul Street. This store became too small for his extensive business, and in 1856 he removed to the present new store, which he built and fitted up with every convenience for carrying on the hardware and stove business in all their branches. The stock of Messrs. Hagar & Co. is large and comprehensive, and their establishment well adapted for its accommodation. The fifth story contains a large quantity of tin ware, and such utensils as are requisite for stoves, cooking and other kinds. The fourth story is occupied with heavy hardware. Here are to be seen cooking stoves of every pattern, and of all sizes. There is also a large assortment of tin ware; and of glass ware there is abundance as well as variety. Again, there are to be found lanterns of the best make, chains, warehouse trucks, stove fittings, furnaces, nails, heavy pot-ash kettles, with farmers' stoves and boilers. The third story contains the agricultural department; and here may be observed implements of all descriptions, from a rake to a reaping machine or straw cutter. There is displayed in this department an article whose usefulness, if better known, would ensure for it wide public patronage, namely, a portable baking oven; it is made of galvanized iron, double all over; there are several shelves inside, and at the bottom is a little grate; a stick of wood heats the entire oven, in a very short space of time. This oven can be placed in the chimney, and by this means the dwelling house is preserved from the extreme heat which accompanies cooking, it will also answer as a plate warmer; but in fact its points of excellence are beginning to make themselves known, as it is already coming into general use in hotels and in private families. In addition to the numerous unnoticed

articles, this story contains a very large collection of shelf hardware, which must be passed over. The second story is appropriated to the purposes of a stove department, of which there is a large number of the most improved patterns. Here there is also to be seen a large assortment of refrigerators, meat safes, water coolers, &c. There is a handsome selection of American grates and fenders, in black, plated and gilt mouldings, with plate glass summer pieces to close. This story also serves as a sample room for, among other things, washing machines, clothes mangles, fenders, and the challenge kitchen ranges. There is a large assortment of registers and ventilators. These articles, it is apprehended, have not received from the public the attention to which their importance entitles them. If many of our large halls and other places of public resort—if our larger houses, for instance, were supplied with efficient registers and ventilators, not only a vast amount of discomfort would be warded off, but the dangers attendant upon the inhaling of vitiated air would be effectually prevented. It is scarcely necessary to observe that the registers and ventilators of Hagar & Co. are as good as can possibly be constructed. The first flat is the shop, or rather the retail department. It would be impossible to enumerate the variety of articles for sale here. Nothing in the hardware line seems to be left unrepresented. Here, again, the eye rests upon an excellent collection of cooking stoves, from those used in the small at home to those in requisition in the largest hotels. There is one specimen, named a double-oven stove, which seems to possess many advantages, one of which is that the waste heat is made to warm the second oven. With regard to the matter of builders' hardware, Hagar & Co. supply everything in that line, such as richly plated door locks and knobs, decorated door knobs and furniture, &c. There is also for sale, Stanley's patent hoisting machines, which possess great power and at the same time durability. Hagar & Co. also sell Herring's patent fire-proof safes, an article which has achieved considerable reputation. With every article in their trade, the firm is amply supplied.

SAVAGE & LYMAN.

The firm of Messrs. Savage & Lyman, Importers and Manufacturers of Gold, Silver, and Plated Ware, Watches, Jewellery, &c., &c., is one of the oldest in the city. The business was first commenced in 1818, by the late Mr. Geo. Savage, in company with his son, in the building now occupied by Messrs Murphy & Brothers, Notre Dame Street West. In 1826 they removed to St. Paul Street, opposite the old Hotel Dieu. In 1835 they again removed a few doors east, to the building now occupied by Messrs. Thomas, Thibandean & Co., and three years afterwards to the store now occupied by Mr. Alex. McGibbon, corner of Notre Dame and St. Gabriel Streets, where they remained for a period of twenty-two years, opening in 1859 the premises they now own and occupy 159 Notre Dame Street, where stood the old English Cathedral previous to its destruction by fire. Messrs Savage & Lyman have thus removed five times in a half century, being necessitated thereto to keep pace with the changes of the city and the growth of their business. Mr. Theodore Lyman became a partner in 1851, and the business has since been carried on under the style of Savage & Lyman, in the premises already mentioned, which forms one of the buildings known as "Cathedral Block." It is three stories high, and of beautiful architectural proportions; it has a frontage of 25 and a depth of 80 feet. The windows, which are very large and handsome, are squares of plate glass, measuring 15 feet in height by 6 feet in width. The stories are very lofty and lighted from both front and rear. The store throughout is most beautifully fitted up. Messrs Savage & Lyman's display of Jewellery is unsurpassed in the Province; their stock includes every variety of silver ware, pitchers, tea and coffee sets, trays, knives and forks, presentation plate, crosses, badges, &c. Lately a pitcher composed of Canadian silver, mined in the Lake Superior region, has been manufactured by Messrs. Savage & Lyman. It is of large size, elegant design, and presents a very beautiful appearance. There are some very hand-

some bronze, marble and porphyry vases on exhibition; ornamental writing desks in numbers; brooches, rings and bracelets of every design and value. The guard chains produced in the workshop of the firm are fully equal in attractiveness of pattern, and purity of metal, to any imported. The quantity of watches is as great as varied; they are of all designs and of every cost. A number of these watches are from the establishment of Ulysse Nardin, Geneva, acknowledged to be the most accomplished in his trade of any one in Europe or America. There is a species of watch sold by Savage & Lyman, made by the celebrated Johnson, of London, which is called the "Universal seconds watch;" it is beautiful in shape, of complex construction, but of the greatest utility in timing races or indicating fractions of the second. This watch should be seen to be understood and its usefulness appreciated. There is also another kind of watch, called "The Night Indicator or Blind Man's Repeater." In the whole range of watchmaking, perhaps, there is nothing to equal this for utility. By a simple contrivance on the outer rim of the case, the time of the night is as accurately made known in the dark as if in broad daylight. A man deprived of sight, is informed of the exact hour by the same means. Their assortment of clocks, mantel, hall and house, is very extensive and complete. Messrs. Savage & Lyman have for sale a portmanteau, of very excellent design; it is compact in shape, an admirable *vade mecum*, and in the interior contains space not only for change of clothing, but holds a dressing case and writing materials, envelopes, pens, pencils, ink and paper. There are also on view knife-cases, finely formed outside, and having inside compartments sufficient to hold all the knives used by a family; it may be well to add, that these knives are manufactured in Sheffield, to the order of this firm. Among the many statuettes exhibited, are those of the Prince and Princess of Wales; they are of pure untarnished marble, and very beautiful. Messrs. Savage & Lyman are large dealers in military goods, such as swords, sashes, and all the requisites for complete uni-

forms. They also deal in every variety of electro-plated ware. Indeed so varied is the stock in their show rooms, that a visit and that only can enable any one to appreciate its extent, and the skill and taste evinced in the production of the different articles that meet the eye.

MATHEMATICAL AND OPTICAL INSTRUMENTS.

Mr. Charles Hearn, Manufacturer and Importer of Mathematical and Optical Instruments, 160 Notre Dame Street, Montreal, is a gentleman whose establishment is well worthy of a visit by all who wish to ascertain by actual observation to what perfection the higher mechanical arts have been brought in Canada. The school apparatus, surveying instruments, microscopes, drawing instruments, telescopes, barometers, opera and marine glasses, thermometers, magic lanterns, chemical apparatus, philosophical instruments, hydrometers and sacherometers, gauging rods, scales, rules, hygrometers, &c., here for sale, are highly worthy of the attention of all whose pursuits, or scientific taste, render the possession of such objects necessary. It may be asserted, without fear of contradiction, that similar articles better made or more highly finished it would be impossible to procure in any workshop in the United States or elsewhere. Mr. Hearn is the manufacturer of an exceedingly valuable instrument, for testing coal oil, and named a pyrometer. This invention accurately and plainly indicates the precise degree of temperature at which the vapours of petroleum or any hydrocarbon oil produces an explosion, and also the temperature at which the oil will be ignited by the approach of flame. This "coal oil Pyrometer" is an article that reliably and quickly tests oils of all descriptions, and enables the purchaser at once to reject such as inflame or vaporize at too low a temperature for safety in household use. By the use of this instrument many if not all, of those dreadful accidents, which the newspapers are called upon to record so frequently, may be prevented. Mr. Hearn has an ex-

cellent collection of school apparatus, illustrating the leading principles of physical science; and those who aim at reaching the understanding through the vision, could not do better than test by personal inspection, the merits of these and other cheap and beautiful instruments to be seen at Mr. Hearn's establishment.

MONTREAL MARBLE WORKS.

These works, which are now carried on by Messrs. James Mavor & Co., were first established in 1846 by Mr. Sherman, in Great St. James Street, on the ground where the St. Lawrence Hall now stands. Shortly afterwards Mr. Sherman moved a little west in the same street, and afterwards to St. Paul Street, where he sold out to Messrs. Hyatt & Co. The works were again moved to the building now occupied by Mr. Irwin, saddler, in McGill Street. Here Mr. Mavor became a partner of Mr. Hyatt's, in 1851, and so continued until 1858, when Mr. Mavor became sole proprietor, having in the meantime removed to the corner of St. Peter and Craig Streets, where the works are now carried on. Every use to which marble can be made subject, is here to be found represented, and that, too, in a very superior manner. A brief description of the nature of the work carried on in this establishment may, perhaps, have the effect of serving to interest the reader. To begin, in the first place, with mantel pieces—there is every variety of these to be found on exhibition. They are of marble, plain and sculptured, and of various prices, and contain American made grates of the latest designs and of all patterns. Some of these mantel pieces are exquisitely carved, and display a profusion of design that takes the spectator by surprise. But this will not appear strange when it is known that Mavor & Co. have made it a constant study how to transform the plain mantel piece into an elaborate work of art; and it may with safety be said that the taste and finish displayed are not to be surpassed by any European artist. A visit to this show-room will convince the most fastidious that while such talent and

facilities exist in our midst, there is no necessity for leaving Montreal in search for better sculpture. These mantel pieces are composed of different varieties of marble, such as Egyptian (green and gold), Lisbon and Verd antique. Mavor & Co. have commenced a new branch of their trade: they have begun the manufacture of marble tiling, inlaid with black or fancy marbles. These tiles are made of every shape and design, and to suit every floor and every taste. There is no doubt that among the wealthier classes of the community this new addition to house decoration will come into general use; of its beauty there can be no question, neither can there be a question as to its durability. As far as regards sculpture, Mavor & Co. may justly feel proud. Like the kindred art of painting, it is one that appeals instantaneously to the senses, with a pleasurable power peculiarly its own. Mavor & Co. produce their sculptures from original designs. At first the model is made out of clay, this is then placed in a mould and a plaster of Paris cast is taken. The cast is then placed by the right hand side of a workman, and a huge block of marble before him. He begins to cut away the marble, following his model all the while. At length the marble begins to assume shape and proportion, and the sculptor then comes in and adds the finishing touches to the statue. The models of Mavor & Co., as stated before, are original, and they merit the praise of great beauty. They have, in plaster, an allegorical male figure, representing the resurrection. The form is that of an angel, and the face one of half-joyful, half stern satisfaction. The one hand grasps a trumpet, and the other displays a scroll. Altogether the conception is as striking as it is beautiful. There is an original allegorical cast of Religion and Hope; the figure is that of a female; one hand holds the cross and the other leans upon an anchor. It is impossible to describe the effect of this exquisite work of art—the serene look, the attitude of security, the beneficent repose of the angelic countenance. There is a model of a sleeping child, also original. Here everything is the transcript of nature; the dimpled cheek pillowed easily upon the round-

ed arm, the garment fallen from off the soft young breast, the limbs disposed in heedless yet graceful languor. Then again there is an allegorical figure, also original, representing the silence of Death. The conception here is as grand as it is imposing. The one hand holds a torch, upturned, emblematical of the extinguishing of life; the finger of the other hand is held to the lips, imposing silence. This statue is now in course of carving, out of a block of pure Carrara marble. It is destined for the Mount Royal Cemetery. It is not hazardous too much to say that among kindred sculptures, even there, it will take pre-eminence for beauty, excellence of design and appropriateness. Mavor & Co. execute some exquisite *bas reliefs* in marble, from original designs. They have now two on exhibition, entitled respectively, Winter and Autumn. In each the figures are beautifully brought out, and are intended for mantel pieces and when set in the richly tinted Lisbon marble, will have a very fine appearance. Mavor & Co., as is well known, have been engaged successfully in the sculpture of monuments. A great many which now adorn the Mount Royal Cemetery are the product of their workshop; and many a magnificent obelisk there owes the beauty which challenges the admiration of the spectator to the skill of their sculptors. Mavor & Co. also manufacture a great number of plain and sculptured washstands and table tops, all of the handsomest pattern. The Montreal Marble Works deserve the support of our citizens at large, not only for the excellence of the productions it sends forth, but in order to encourage native talent as much as possible. In the matter of public monuments, such for instance as are used for the decoration of squares, the people of Canada have no necessity for visiting foreign studios, while there exists in their midst so much approved skill. It speaks well for the taste of the people of this city that they appreciate the arts so well as to enable such as Mavor & Co. to continue the production of such beautiful objects of sculpture as from time to time issue from their establishment.

IVES & ALLEN'S FOUNDRY.

This establishment, situated on Queen Street, is one of the largest, considering its own particular business, in Canada. The proprietors are extensively engaged in the manufacture of builders' and house-furnishing hardware, comprising such articles as door latches, locks, hinges, hat and coat-hooks, smoothing irons, &c. Messrs. Ives & Allen are the only persons who introduced those branches of manufacture into Canada, which, by their exertions, they have carried to a successful issue. In addition to the articles mentioned above, they also manufacture iron railings, stoves and hollow ware, and execute general foundry work, under which last particular may be classed almost every article made out of cast iron, weighing from an ounce upward to a ton; the principal part of this work, however, is of the description known as ornamental castings. The premises of Ives & Allen extend from Queen to Prince Street, and are 180 feet deep by 90 in width. On entering the foundry, which is 140 feet long, an interesting sight presents itself:—a large number of men are ranged on each side of the building, busily engaged in moulding. The process of moulding is an ingenious one, and, though rapidly performed, the greatest care has to be taken in order that every line and curve of the pattern may be preserved. The sand used is brought from Albany, there being none in Canada suitable for the work. The same sand is used over and over again, until the red-hot metal has destroyed the loam or tenacious principle. There is to be seen here an immense variety of castings, comprising everything in the hardware business. Among other specimens of the moulder's art, a superior description of kiln plates, for drying malt, is pointed out. These are light iron plates, 18 inches square, and pierced with hundreds of longitudinal apertures, which must all be of equal and exact size, and the plates must also be perfectly straight, or they would be of no value. Heretofore these plates, for the most part, were imported from Scotland and the United States; but the plates turned out

by Ives & Allen are pronounced to be superior to either, as they are smoother, lighter, and having a larger number of holes of uniform size. Here are also to be seen metallic burial cases, and as they require to be light and smooth, are difficult to cast, and require great skill in moulding. In the pattern room, which is in a brick building adjoining, there are a vast number of patterns of the different varieties of manufactured articles, all of which are valuable, being for the most part made of brass and highly finished; these amount in value to several thousand dollars. In the wood pattern shop are carvers, designers and fitters. Here the moulding apparatus and boxes, large numbers of which are required, are made; there is a circular saw, as well as other convenient machinery, for the purpose. At the present time two elegant patterns for railings are in hand. One is designed for a railing in front of the new Royal Assurance buildings; and the other for the residence of Mr. Winks, in Dorchester Street. These the public will soon have an opportunity of seeing in their proper places, and they will be worth examining as fine specimens of workmanship. Returning through the noisy and dusty milling and polishing room, the main building is again reached, the first floor of which is the machine room. Here there are a number of ingenious labour-saving machines; they require but little attention, and do a great amount of work. For instance, there are self-acting lathes, four of which are operated by one man; there is also a drilling machine, which is attended by one lad, and drills six holes simultaneously. The second story is divided into an office and sample room, and also contains the packing room. These rooms are surrounded by deep shelves, closely packed with hardware, neatly wrapped in strong paper and handsomely labelled. It is the intention of Messrs. Ives & Allen to keep a stock of all these small wares, so that orders coming in from any part of the country may be filled at once. In the third story is the japanning room, with its large oven, for baking or drying the article after it has been dipped in the Jap-an. In another room, pattern makers are employed in construct-

ing and finishing metal patterns. A great number of small articles of ornament are attached to one gate, and then cast in one piece; afterwards they are separated. On the other side of the street there is a large storehouse, nearly 100 feet long, and filled with stoves, hollow ware, bath tubs, chimney caps, &c. Messrs. Ives & Allen have been four years in bringing this business to its present state. When they started they had about a dozen persons employed; now they have over 60, and what is noticeable is that there is among them but few boys. All the persons engaged—or mostly all—are skilled workmen, who earn large wages, some as high as three dollars per day. Messrs. Ives & Allen do not retail their hardware, stoves, or hollow ware, but sell only to wholesale dealers throughout the Province. The chief disadvantage they labor under here, is the limited market, which obliges them to keep a large variety of manufactures, in order to make their business of sufficient amount, instead of confining themselves to a few articles. In passing through the establishment of Messrs. Ives & Allen one cannot fail to be much interested, and wish their enterprise that success which their energy seems to entitle them to.

PROWSE & MACFARLANE.

This establishment, situated No. 66 Great St. James Street, has been long and favorably known as a House Furnishing and Hardware establishment. The building is partly of cut stone and three stories in height; a portion of it extends from Great St. James to Notre Dame Street. The show and sales room occupy the first flat, the upper stories being appropriated to the numerous manufacturing departments connected with the business. The first who carried on the trade in these premises was Mr. G. F. Prowse, who commenced business so early as the year 1830. After a long and successful career, he retired in 1860, in favor of his son, Mr. George Prowse, and Mr. James Macfarlane who was 28 years in his employ. The establishment may be considered as one of the most ex-

tensive in the trade. For the manufacture of cooking, parlor and hall stoves, this firm has been long and deservedly celebrated. In the construction of grates, baths and water-coolers, they have introduced many improvements; and in the manufacture of iron bedsteads they have obtained great success. These bedsteads are made in the most careful manner, and are beautifully finished. They are formed of wrought iron, and in the English style, besides they are handsomely japanned; in a word, these beds possess every advantage of comfort, cheapness, ornament and durability. Of baths, also, this establishment turns out a great number. For planished, japanned and plain tin-ware of every description, pattern and use, the manufactory of Messrs. Prowse & Macfarlane presents large and varied specimens. Their garden chairs combine the three great requisites of ornament, cheapness and usefulness. The firm also carry out the business of plumbing, gas-fitting, tin and iron roofing, in all their respective branches. Their zinc and galvanized-iron roofing material is in great demand, possessing as it does an immunity from the deteriorating effects of the atmosphere, which no other metal for roofing can boast of. The refrigerators manufactured by this firm are constructed upon the most approved scientific principles; they are of all sizes and prices, and are admirably adapted for the important purposes for which they are intended. The firm is largely engaged in the manufacture of hot air furnaces, of which it may be said that their compactness, cheapness and utility are only equalled by the careful workmanship bestowed on their production. The premises of Messrs. Prowse & Macfarlane are very extensive and admirably adapted for the carrying out of the business in which they are engaged, and afford ample accommodation to the numerous workmen kept constantly employed. The show room is about 90 by 30 feet, and contains, besides such articles as are manufactured on the premises, every conceivable utensil required in house-furnishing. In looking over the various articles one is struck with surprise when they see so many inventions for domestic utility and convenience, of which

so few people know anything whatsoever. The large show cases round the shop and in the centre of the floor contain a choice selection of plated-ware and cutlery. A visit to the show room of these gentlemen will amply repay any housekeeper; for no one can witness this display without learning something in the matter of comfort and household economy that cannot be easily obtained in any other way.

HOME-MADE PIANOFORTES.

A visit to the show rooms of Mr. Thos. D. Hood, Pianoforte Manufacturer, Great St. James Street, Montreal, will convince the Professor of Music, or the amateur, that there exists among us both the talent and the means for producing instruments that will bear comparison, in quality and style, with the best that can be constructed. Mr. Hood is successor to Messrs. Mead, Bros., who were the first to introduce the manufacture of pianos into Canada, having established themselves in this city in the year 1827. Messrs. Mead, Bros. successfully prosecuted the business for a period of twenty-five years, retiring in 1853, when it passed into the hands of Mr. Hood, who had acted as their foreman for many years. Mr. Hood first conducted the business in the premises No. 29 Notre Dame Street. In 1857 he erected the factory in Champ-de-Mars Street, which he still occupies, and in 1860 removed his show rooms from Notre Dame Street to his present location, adjoining the Wesleyan Church, Great St. James Street. Mr. Hood has devoted many years to the study of his profession, and has brought to bear upon it the skill which extended practice and observation impart, and the complex and scientific acquirements which every mechanic, but especially the maker of musical instruments, should possess. He has perfected a new and strengthened scale, which gives increased power to the bass, and also superior clearness and depth of tone to the treble. It is impossible to convey, on paper, the nature of the improvement thus introduced; the ear alone can judge and appreciate. Mr.

Hood has often had the opportunity of competing with foreign made pianos, and it will be a source of gratification to Canadians to announce that the former has borne off the palm. An instrument manufactured by Mr. Hood, and sent to the London Exhibition, gave such satisfaction that it was purchased for the Sydenham Crystal Palace. In addition to the excellent quality of these instruments, their cheapness, as compared with those imported, is also a strong point in their favour. In purchasing direct from the manufacturer, the opportunity (which cannot be had in an auction room) is afforded of thoroughly testing the instrument on the premises of the maker, whose reputation and professional character depend upon the good qualities of the article, and upon his treating his customers with the utmost good faith. Mr. Hood has spared neither time, money, nor experiments in bringing his art to perfection. The pianos produced in his workshop possess a power, depth and sweetness of tone, which must be heard to be appreciated; while their exterior finish and beauty of workmanship render them an ornament alike in the mansion or the cottage. The manufactory of Mr. Hood, on Champ-de-Mars Street, exclusive of the basement, is four stories in height. The basement is used for the storage of varnish, cases of veneer, packing cases, and the heavier materials used in the making of pianos. It is necessary to keep the veneer in this place, for the substance is so delicate and at the same time so sensitive, that a very small degree of heat would cause it to shrivel up, and thereby render it useless. The first flat is used as a room for constructing the cases as well as the sounding boards of the pianos. There is more trouble in making the case of one of these instruments than most people would suppose. The second flat is appropriated to the purposes of a finishing, key-making, stringing and pinning department. There are many ingenious machines in operation here, but there is only space to notice one, namely, an apparatus for spinning strings. This machine is employed for the purpose of covering the iron wire with silver wire, an operation too complex to describe minutely.

ly, but rapidly and efficiently performed. On this flat the pianos are supplied with the necessary "action," and are finished and made ready for the ware-room, Great St. James Street. The third flat is the polishing department, and here, also, the pianos are varnished. To polish a piano is a work of considerable difficulty. In the first place four coats of varnish have to be applied, and before the process is complete, eight coats more have to be added. It requires about three months to finish the whole properly. The fourth flat is used as a drying room, where the wood, before being sent to the workshop, has to be thoroughly seasoned. The factory is under the superintendence of Mr. McGregor, the foreman. When one comes to think of the trouble which it must cost to make a first-rate piano, of the necessity for the greatest accuracy in adjusting the different parts to each other, of the nicety with which the springs and action must be regulated, it is a matter of surprise that the perfected instrument can be procured with such comparative cheapness.

MANUFACTURE OF BROOMS & MATCHES.

Messrs Adams & Co. established their business in 1859, in one of Joseph's buildings, Lemoine Street, removing in the following year to the central and commodious premises they now occupy, 45 Great St. James Street. Their show room exhibits every variety of the manufacture of Wood. Fronting on Great St. James Street the building is three stories in height, and stretches backward 120 feet to Fortification Lane, where it is five stories. The first flat is crammed with boxes of Telegraph matches; and up to the topmost story there is a great variety of every kind of pails, tubs, butter-tinnets, washing-boards, brooms, &c. In short, there seems to be hardly any species of use to which wood can be converted, that remains unrepresented in this establishment. The quantity of brooms is astonishing. The articles of wooden and willow ware are exceedingly numerous. In one branch of their business Adams & Co. are large

dealers, that is to say in skirt cane. Since the Empress of the French introduced this novelty in female attire, it has become a regular branch of trade. In the great iron manufacturing towns of Great Britain hundreds of tons of steel are annually converted into hoops; but there are many instances to show these may prove highly dangerous to the wearer. But the cane skirt, whatever its objections to some, possesses, nevertheless, the merit of comparative safety. The ladies of Canada have here an immense stock from which to supply themselves; and these articles of dress have the merit of cheapness and durability to recommend them. The firm of Adams & Co. are largely engaged in the manufacture of Telegraph matches. These useful articles are made in inconceivable quantity. The process of their production is a very ingenious one, and can be carried on with great rapidity. For this purpose, as well as many others, the Firm have two factories in Colborne Avenue. These of course are occupied by machinery, which now-a-days performs its part so extensively in every stage of mechanical labour. The factory employs a considerable number of men, boys and girls the whole year round. The Telegraph match manufactory of Adams & Co., situated in Colborne Avenue, is a place that presents many points of interest. Many people who use these matches doubtless have wondered how so many can be given for so small a sum; but when the process of manufacture comes to be briefly explained, the reason will probably be understood. The business is conducted in a two-story brick building. On the upper flat is a bench containing a series of saws, the work of which is to groove the boards intended for the boxes, that hold each a quarter of a gross of matches. These boards are grooved with astonishing rapidity, and are fitted into their places with equal speed; so that no fewer than five hundred boxes can be turned out in the course of the day. On the first flat is powerful machinery for preparing wood to be formed into matches. A log is cut up by a circular saw, is then pushed under a planing machine, then is made into blocks about five or six inches in thickness and twice the length of the com-

mon match. This block is split into the size of the match in the following manner: a mould of steel is fitted into the back of an iron bed, so that it projects slightly, but corresponds to the depth of the block of wood. This mould has running lengthwise through it a series of holes, the size of the match in thickness; each hole alternates with a very small chisel. The wood is placed within a holder leading across to the mould. The machine is then started, the wood lying upon its flat side—rushes against the mould endwise, and struck on the other end at the same time by a powerful bar of iron running horizontally, is sent into a basket in showers of splinters. The matches are straightened and put in rows into a frame. They are then at both ends dipped into a vessel of boiling sulphur, and afterwards into a preparation of phosphorus. When dried they are shaken upon a bench; a little girl takes a handful, adjusts it to equal lengths, chops it in the middle with an apparatus at her side, then packs them into boxes. The rapidity with which this latter process is performed is wonderful, for as many as thirteen of these boxes can be closely filled and covered in a minute. The establishment employs a number of men, and a large number of boys and girls, and can turn out about 125 gross of boxes—that is to say 2000 boxes per day. The factory, by the employment it affords, is of much benefit to the neighborhood. Adams & Co. have a building near at hand where brooms, &c., are manufactured. The corn from which the brooms are made come from Illinois. The number of brooms turned out is considerable, which are, like the matches, sold over the Province. A number of men and boys are also engaged in this business.

REDMOND'S FOUNDRY.

The foundry, at the present time rented by Mr. Cantin to Mr. Redmond, consists, properly speaking, of three separate buildings. The foundry, however, is complete in itself, and the proprietor has all the facilities for performing any sort of work whatever. The place is divided into three departments, in the first of which the

casting of heavy iron is carried on. Here there are two cupola furnaces, for the emptying of which, when a heavy casting is to be made, an enormous ladle, capable of holding no fewer than twelve tons of molten metal at a time, stands in proximity. Here also is what is called a core oven, a large vaulted chamber, with a fire in one end. The business of this oven is to dry the cores, or inner parts of heavy castings, and to do this a large furnace is heated, and an iron door at the other end of the chamber, opening upon the place where the castings are made, is closely shut. This process is carried on during the night, so as to have the cores ready for the workmen the next day. The blast for this, as well as the two cupola furnaces, is conveyed by underground pipes, from a building a hundred feet distant. In this same department, No. 1, is the model room, containing a great variety. Department No. 2 is where the lighter castings are effected; and Department No. 3 is the brass foundry. The buildings known as Nos. 2 and 3 are devoted to the construction of engines and boilers, and in the last named place there is a powerful punching and shearing machine, of Mr. Redmond's own construction. A brief space separates this foundry from Mr. Redmond's own place, where he has carried on business for the last twelve years, having previously been engaged in the same trade in St. Antoine Street for eleven years. This foundry is two stories in height, and is 100 feet in length by 45 in breadth. The lower part is the finishing and machine shops; but to attempt to describe, so that an unprofessional reader might understand, the uses and working of the lathes, planing machines and screwing machines here in operation, would be a fruitless task. The second story of this building, contains the office and model room. On passing out the foundry proper, a place 70 feet long by 62 feet wide is entered. This foundry possesses, of course, every requisite for the business. But in one department of his business, Mr. Redmond has achieved a great deal of success—that of casting water pipes. Mr. Redmond was employed to manufacture the greater part of the

pipes which convey water from the reservoir to every part of the city. These pipes are of every size, and it speaks highly for the skill used in their construction, and the quality of the metal employed, that they have so far withstood the immense pressure of the head of water that descends from the reservoir, as well as the trying tests of climatic variation. It may be interesting to note that those pipes commanded a value of ten per cent over those made in England. The hydrants and stop-cocks were also made at this foundry. The casting of these pipes is a labour requiring great care and the utmost accuracy. To describe the operation might fatigue the attention of the reader, so complex is the machinery, and so various the process. This much, however, may be said, namely, that the testing of the pipes by the Corporation, prior to their acceptance, is an experiment of no ordinary character. The pressure of the City Water Works is applied, and then comes into operation the powerful agency of the hydraulic pump. The result is that a force equal to a head of water four hundred feet high is applied to every square inch of surface; and should the pipe give the indications of even a microscopic leakage, it is at once rejected. This operation will show with what care a pipe must be cast. Leaving the foundry, the yard is entered; but casting a glance merely at such places as the coal and coke sheds, &c., the place where the pipes are tarred is pointed out. The pipes, red hot, are thrown into a tank of distilled coal tar, and the pores of the iron being then open, so to speak, absorb the liquid, which has the effect of postponing rust and corrosion 50 years longer than the time it generally takes the agencies to interfere with their serviceableness. The premises of Mr. Redmond are extensive, as may be inferred from the fact that they cover an acre of ground. Mr. Redmond has now entered largely upon the manufacture of stationary steam engines, though always more or less engaged in this branch of the business. These engines he can sell for less than those made in the States; the buyer, besides, saves the incurring of the duty of twenty per cent. He has erect-

ed these stationary engines for several firms in the city, and intends keeping a stock constantly on hand. He also manufactures portable engines, gas pipes, valves, castings,—everything in fact that is produced in any foundry.

WALL PAPERS.

To decorate the house is one of the first objects of every family, and for the gratification of this desire there is no place to which one can be referred with more safety than to the establishment of Mr. R. Holland, 182 Notre Dame Street. Mr. Holland established his business here fourteen years ago; the store was then only one-eighth of its present size, nevertheless it compared favorably with most of the stores then in the street. The trade in those days, in paper hangings and fancy goods, was very limited, but Mr. Holland gave it an impulse by adopting the principle of "small profits and quick returns,"—an impulse which showed itself in a marked manner by the rapid increase of his business, so much so, that his store soon became too small, and the upper part of the building, which was then used as a dwelling, had to be turned into warerooms, and subsequently Mr. Holland erected a brick wing, covering the whole of the yard and connecting the front store with the wholesale department. This made the establishment very extensive, yet it is not sufficiently so to meet the present requirements of his business, and Mr. Holland is contemplating further enlargement. In the upper story of the building is a reserve stock of toys of every kind that ever, perhaps, was invented to please infantile fancy. Descending from this the visitor comes to the Berlin wool room, where there is such an assortment as would serve for all the apt female fingers of a city. On this flat also is the show room of French decorative paper hangings, and of these the supply is really immense. There is here a very unique arrangement, namely, a sample board, or series of screens, folding outward as well as inward. These sample boards are intended to represent panels, and exhibiting the ef-

fects of the various wall papers. For the purchaser this is a very useful contrivance, as it enables him or her to understand at a glance the effects which, at a distance or near at hand, the numerous wall papers possess. As already mentioned, the number of specimens of papers here on view is almost unlimited. Along the whole room throughout its full extent, piles upon piles of this decorative material are everywhere visible. And as to the specimens, their richness and beauty defy description. The exquisite designs of the Alhambra, the impressiveness of a Gothic ruin, gorgeous combinations of green and gold, and of gold and scarlet, beautiful comminglings of the fairest flowers, roses, clusters of lilies, fir cones, the Greek cross jewelled—these designs from art and from nature are as profuse as a painter could desire or the most fastidious wish to possess. The perfection to which decorative taste has arrived, in the matter of producing wall papers, can only be understood when witnessed in this show room. As various as are the designs, just as various are the prices, ranging from threepence per piece to five dollars. It may be mentioned here that the basement of the premises shows by its extent and contents the amount of business transacted by Mr. Holland. The basement, divided into a couple of compartments, is choked up almost with solid bales of wall papers; no one would believe there was such a stock to be found in Canada. Then there is in the back store two flats, one of which is the wholesale department of paper hanging; in the upper flat is stored a large quantity of willow ware. In the front store there is an immense stock of toys of every shape in natural history or in the mechanical arts, and fancy articles without number. It may be important to state in conclusion, that Mr. Holland has made arrangements with skilful decorative artists, by which he is enabled to undertake the fitting up as well as the furnishing of the paper hangings for his customers, a fact which will save much trouble and expense, and prevent incapable labor from marring otherwise beautiful effects.

NEEDLES, FISH HOOKS, FISHING TACKLE, &C.

The establishment of Mr. William H. Hiam, 42 St. Francois Xavier Street, is the only place in Canada where the needles manufactured by Charles Hiam & Sons, Astwood Bank, near Redditch, Worcestershire, England, are to be obtained in wholesale quantities. The needles made at Astwood are of very superior quality; and the manufactory is owned by the father and brothers of Mr. W. H. Hiam; it will be perceived, therefore, that Mr. Hiam has peculiar facilities for obtaining the best articles at the lowest prices. He does a large trade in needles in Canada, where none whatever are made; a great number, also, are exported to the States. The Sewing Machine Needles of this firm are highly appreciated in this country, for every quality which such articles should possess. With regard to this latter description of needles, it may be stated that the demand for them is very extensive in Canada, and that in Astwood it is the principal business of the manufactory to supply them. In the Fishing Tackle department, are hooks of every description, and formed with such skill as old Izaak Walton never dreamt of; hooks for every fish that the angler ever desired to try his art upon. The work upon these hooks is of the very best kind, and more effective instruments for making war upon the denizens of our lakes and rivers, human ingenuity could hardly devise. Mr. Hiam always keeps on hand a variety of fishing tackle of the best make, and most effective mechanism. The specimens of this tackle on exhibition deserve the attention of every lover of the sport. Mr. Hiam is also a wholesale importer of Small Wares and Fancy Goods, of which his assortment is perhaps equal to any in Canada. In Buttons, also, his connection with several leading Birmingham manufacturers affords him great advantages. He makes it a point to procure from England the latest styles, and the consequence is that his establishment is always supplied with such a stock of these articles as allows the purchaser the widest choice and, at the same time, the advantages of excellence and cheapness.

BROOMS, WOODEN WARE, FANCY GOODS, &c.

The establishment of Messrs. Nelson & Wood is situated on St. Peter Street, directly opposite Lemoine Street. The business was first established in 1840, by Mr. H. A. Nelson and Isaac Butters, under the firm of Nelson & Butters, in the store now occupied by Mr. Biron, corner of McGill and St. Joseph Streets. Their stock then consisted of wooden ware, which was brought from the States. In 1842 they removed to No. 70 McGill Street, adding to their stock, palm leaf hats, clocks, looking glasses and fancy goods. In 1846 they removed to No. 68 in the same street, to accommodate their increasing business, and about this time commenced the manufacture of corn brooms, which has since become a leading branch of their business. In 1856, finding their business required still larger premises, they purchased part of the land on which stood the buildings known as the old Exchange Hotel, and in the same year erected the stores which they have since occupied. Nelson & Butters continued in business from 1840 until 1861, when, owing to ill health, Mr. Butters retired from the business, Mr. A. S. Wood taking his place, and the firm changed to Nelson & Wood. The building is of cut stone, four stories in height, and very capacious. The first flat is taken up by a very extensive ware-room, which contains fancy goods of every imaginable variety. Here are displayed stationery, English and American; all kinds of brushes, combs, soaps and perfumery, travelling bags, children's carriages and horses, jewellery and fancy goods, dolls and toys, small wares, looking glasses, looking glass plates, clocks, bronze, plain and fancy, &c., &c. There is to be procured in this ware-room every kind of goods such as generally meet with a ready sale in country stores. The second flat of the building is chiefly used as a store-room for paper hangings, mirrors, imported or manufactured; toys, children's carriages, wooden ware of all descriptions. The third story is appropriated to the uses of a packing room,

and the quantity of brooms that wedge up this part of the premises is perfectly enormous. Brooms, brooms everywhere, some drying, some getting ready for that process, and piles of them finished and in course of being packed up previous to their being sent to market over the Province and to other places. The fourth story is the place where the broom-handles are painted and gilt; this occupies four processes, but is performed with great rapidity, and when giving the last finish, one man can manipulate as many as three thousand in the course of the day. Although the building is only four stories, its capacity is equal to five, as it contains a most excellent basement, admirably adapted for the storage of goods. Messrs. Nelson & Wood are most extensively engaged in the manufacture of brooms, and carry on the work in a wing attached to the end of the building, forming as it were the bottom of the letter L. The way in which the whole thing is carried through may be briefly described as follows:—first of all the corn of which the brooms are made is imported from the Western States, in bales weighing two hundred pounds. The corn is thoroughly saturated in water, and afterwards, bundle by bundle, is placed in a room, one wet mass on the top of the other. When the room is filled, a pan of burning sulphur is brought in, a chemical process then takes place by which every fibre of the corn is bleached. The corn is then assorted as to quality and length; it is then tied upon the handle of the broom, either with wire or cord; it is then pressed by a machine into the common form of a broom, and then placed within a powerful wooden vice, and sewn so as to retain its proper shape; then the inequalities of the edge are taken off with a knife, and the process is completed. Messrs. Nelson & Wood keep quite a number of men employed at this business. The firm have always on hand a large assortment of cordage of every kind. With regard to the manufacture of wooden ware, Messrs. Nelson & Wood offer superior advantages to purchasers, especially of pails, tubs and matches, as they produce them in their factory at Hull in every shape. They also

possess facilities for importing direct from the States and Europe, which enable them to offer goods at the lowest market prices, with special inducements to jobbers and large buyers. The goods sold in this establishment find their way all over the Province, and they have repeatedly received and executed large orders for their pails and brooms from Europe. In addition to the establishment in St. Peter Street, Messrs. Nelson & Wood have separate warerooms in Longueuil Lane, which they use for the storage of corn brooms, matches, pails, &c.

HARDWARE. --- MESSRS. J. WALKER & CO.

Mr Walker, the senior partner of this firm, was for twelve years principal salesman in the well-known house of Ferrier & Co. In 1857 he commenced business in St. Paul Street, and remained there for five years, removing in 1862 to Great St. James Street, next door to the Ottawa Hotel, where he was joined by Mr. James Brown, son of Mr. David Brown, Contractor; and in the following year, the firm was fortunate enough to secure the spacious premises and excellent stand they now occupy, corner of St. Peter and Great St. James Streets. The shop has the advantage of a fine large window in Great St. James Street, well calculated for the purposes of display. On the St. Peter Street side there are three windows and a door. The interior is admirably fitted up, and is of capacious proportions, being 80 feet long by 24 feet in width. A range of shelving runs along the entire extent of the store on the right hand side; on the left, a number of large glass show cases; and in the centre of the place there are stands for supporting various articles comprised in the business. Since Messrs Walker & Co. have taken possession of these premises they have made extensive alterations, principally with a view to the enlarging of the store, as well as to the fitting of it up in the best and most attractive style possible. The store is well lighted, and at night when the reflection of its gas falls upon the burnished articles that abound every where, the effect is very brilliant.

To endeavor to give an account of even the contents of a case in a first class hardware establishment, would be a difficult matter. In the present instance a brief general notice must suffice. The show cases on the counter present to the view of the spectator every variety of hardware, manufactured by the best makers. Messrs. Walker & Co.'s stock comprises, among other goods, the most approved qualities of table cutlery. Then there is Britannia metal ware and silver-plated ware, in any quantity and of every pattern. There are all kinds of toilet sets in tin, handsomely made, and as cheap as they are attractive. For furnishing various trades with articles used in their business Messrs. Walker & Co. possess every facility. They can supply, on demand, builders', upholsterers', cabinet makers', pianoforte makers', and carpenters' hardware. They keep always for sale, a varied assortment of the best description of edged tools anywhere to be found; among the manufacturers of these tools are the firms of Addis and Stubbs—names of sufficient weight to guarantee the excellence of their productions. Messrs. Walker & Co. have an abundance of house furnishing materials, such as hardware, and gilt cornices and cornice poles always for sale. Then, again, there are picture rods, of every size and design. In this connection it may be well to observe that there is a very ingenious invention, lately brought out in England, and which Messrs. Walker & Co. have in stock; this is a long gilt rod or bar, on which to suspend family photographs. The rod is supplied with a key, which loosens a gilt knob, allowing the upper border of the photograph to slide it; the knob is then fastened, and the photograph is secured. The invention is not only an ingenious one, but from its utility as well as elegance will, when known, command a wide approval, and become generally adopted. In the cases ranged along the store are to be seen tea sets, browned urns, table bells, jelly moulds, and various other articles indispensable in domestic economy. Messrs. Walker & Co. have a very fine assortment of English manufactured locks, including those turned out by such celebrated-makers as Chubb and Hobbs. They keep for

sale pumps adapted for town, but principally for country use; and have also a pump of peculiar construction, termed an aquarius, weighing only eight pounds, capable of taking up eight gallons of water per minute, and throwing a stream a distance of fifty feet. This machine is well adapted for arresting, in its first stages, the progress of a fire. In the basement story of the premises Messrs. Walker & Co. keep in stock every description of the heavier kinds of hardware, such as farming implements, carpenters' morticing machines, &c. They have also on hand an assortment of beautiful English wrought iron and tubular bedsteads and chairs, some of which are very ingeniously constructed, susceptible of being converted at will and in a moment either into a most comfortable settee or couch. Messrs. Walker & Co. aim to have always on hand whatever may be demanded either in the wholesale or retail business, and are always prepared to fill any town or country order, no matter how varied or extensive.

THE FUR TRADE.

A few remarks on the early history of the above trade may not be uninteresting, previous to noticing the leading firms engaged in it in this city. It is believed by those who have investigated the subject, that the use of furs was introduced into Europe by the Northern invaders of the Empire of Rome. There seems also to be foundation for the belief, that in the sixth century the skins of sables were conveyed to Rome from such distant localities as the shores of the Arctic ocean; but the cost to the consumers was very great. For several centuries after the period just named, furs were not at all common in the Western parts of the continent of Europe. In the year 1252 the famous Venetian traveller, Marco Polo, mentions as a curious fact that he found the tents of the Khan of Tartary lined with the skins of sables and ermines, brought from countries far north, "from the land of darkness." No later than a century from that time, the wearing of furs, as a fashionable

article of apparel, had become rather prevalent in England, for in the year 1337, Edward the Third commanded that none of his subjects should wear furs unless they could spend £100 per annum. Early in the 17th century the shores of the Arctic seas were found tenanted by furred animals of great value. One Groseliez, a Frenchman, formed the idea of establishing a settlement in these regions. The matter was received coldly by his own Government, but Groseliez obtained, through the English Ambassador, an interview with Prince Rupert, who eagerly entered into the scheme. In the year 1668, a vessel fitted out by the assistance of the Prince, reached a river then called Nemisco, to which the discoverers gave the name of Rupert, in honor of their patron. After wintering there with less difficulty and suffering than had been anticipated, the adventurers returned, and gave such a favorable report of what they had seen, that Prince Rupert, the Duke of Albemarle, Earl of Craven, Lord Ashley and others, formed themselves into a Company and subscribed the sum of £10,500 for the purpose of commencing a traffic in furs. A charter of incorporation, granted by Charles the Second, gave this, the Hudson's Bay Company, "full possession of all the lands and territories upon the countries, coasts and confines of the seas, and possess lakes, rivers, creeks and sounds, in whatsoever latitude they shall be, that lie within the entrance of the straits, commonly called Hudson's Straits, that are not already actually possessed by, or granted to, any of our subjects, or possessed by the subjects of any other Christian Prince or State." The charter further grants, "the whole and entire trade and traffic to and from all havens, bays, creeks, rivers, lakes, and seas into which they shall find entrance by water or land, out of the territorial limits or places aforesaid; and to and with all the natives and people inhabiting, or who shall inhabit within the territorial limits and places aforesaid; and to and with all other nations inhabiting any of the coasts adjacent to the said territorial limits or places, which are not already possessed as aforesaid, or whereof

the sole liberty or privilege of trade and traffic is not granted to any other of our subjects." By these vigorous measures the French Court was awakened to, a sense of its neglect, and Grosseliez, already detached from the English service, was sent out in the year 1682 to found a factory on the River Hayes; this he accomplished, and also surprised the British factory on Nelson River. After this time hostilities became frequent between the French and English settlers; but notwithstanding the immense losses sustained by the Company from 1682 until 1688, amounting to £118,014, they were able, in 1684, to pay to the shareholders a dividend of 50 per cent. In 1688 an equal dividend was made, and in 1689 one of 25 per cent. In 1690, without any call being made, the stock was trebled, while at the same time a dividend of 25 per cent was made on the newly created stock. The French captured other factories in 1692, 16694, 1696, 1697, and the Company suffered losses amounting to \$97,500. But at the peace of Utrecht, in 1713, these factories were restored to the Company, who by 1720 had again trebled their capital, with a call of only ten per cent on the shareholders. In 1749 questions arose in Parliament concerning the rights of the Company, but the matter was decided in their favor. In 1742 several of their factories were taken by the French, under La Perouse; but the trade in furs still continued very lucrative until the invasion of their rights and territories by a strong rival association, the North West Company, whose fierce competition caused much animosity and bloodshed.

The North West Company was an association of twenty-three proprietors, comprising some of the most wealthy and enterprising settlers in Canada. They employed about 200 persons as clerks, interpreters, guides and boatmen, who were stationed all over Canada. The shareholders, who engaged actively in the trade, were called agents, some of whom resided at different posts established by the company, and others at Montreal and Quebec. Bands of this company crossed the Rocky Mountains, about the year 1805, and established stations

on the Northern head waters of the Columbia. In the year 1813, the company purchased Astoria, on this river, which was given up by Mr. Astor, of New York, in consequence of the war between the United States and Great Britain. The Hudson's Bay Company, now aroused, exercised for the first time its chartered right to colonize, and sold, in 1812, a tract of land on Lake Winnipeg, Red River, to Lord Selkirk, who introduced a considerable number of persons from Scotland. The consequence was open war between the partizans of the two companies. There was considerable bloodshed, and much suffering existed until 1821, when the rival companies collapsed. In 1831 the three London representatives of the N. W. Company offered to merge their interests in those of the Hudson's Bay. This was agreed to, and an Act of Parliament was passed, under which the Crown granted to the H. B. Company, and the three representative proprietors of the N. W. Company, in London and Montreal, license of exclusive trade for twenty-one years in the Indian Territory—that is, over all the tracts that might not be included in the charter given by Charles the Second; also, over those tracts which, by mutual consent were open to the subjects of England and those of the United States. In 1838 the Crown granted, for twenty-one years, another license of exclusive trade over Indian neutral territory.

The above is an imperfect sketch of the inception of the fur trade as regards the Hudson's Bay Company—a body that no longer exists, having disposed of the rights and privileges it held for two centuries to another Association.

FURS.—MR. G. LOMER.

Mr. G. Lomer, 277 St. Paul Street, is one of the most extensive fur traders on this Continent. A visit to his premises, a glance at the various manipulations through which a fur must pass before it is ready for the market, a cursory view of the immense stock, give a better idea of the extent of Mr. Lomer's

business than any written description could effect. The trade in furs between this country and Europe is a considerable item in the sum total of the exports of the Province; and when it is considered that furs bear very great value in proportion to other articles of merchandise this trade is an important one, and embraces many interests unnecessary here to explain at length. The stock of skins on these premises is immense, and the value proportionably great. It may be said with safety that nearly every North American European quadruped is here represented—from the weasel to the black bear. The Canadian mink is held in great estimation, but, unfortunately, is difficult to be obtained in a degree equal to the demand. Mr. Lomer employs a large number of skilled workmen in preparing furs, and the work is one that involves far more labor than any one would suppose. From the moment a raw fur enters the hands of the first workman until it leaves those of the last, it is an object on which there is expended constant manipulation. First of all the little flesh that is found adhering is scraped off, and then succeeds a course of very effective treatment, such as greasing and cleaning, tramping, beating, frisking, damping and drying, and all sorts of other wonderful manipulations. The dying of furs is a very ingenious process, as generally only the very tips of the hair is dyed, while the ground fur and leather is untouched. The hunter who entrapped the animal would find it impossible, after the dying process, to say that he had ever seen the skin before. Mr. Lomer is engaged extensively in the manufacture of fur articles used in Canada by both sexes to comfort themselves against the severe weather, and keeps quite a number of artistic furriers (mostly Germans) and a large number of fur sewing girls who, partly with hand work and partly with sewing machines, are employed for such purposes as stitching, lining, &c. But the business has increased so largely that it has been found necessary to erect a block of buildings to suit the requirements of his trade. The block in question constitutes one of the prominent establishments of the

city. Our elder citizens will hardly recognize the situation of the old Platt's stores in St. Paul Street, for in the stead of those premises are now to be seen two grand five story warehouses, 66 by 105 feet. The old property, including the four warehouses in the rear, were acquired in December last, for the sum of thirty-three thousand dollars. The new buildings will cost no less an amount than twenty thousand dollars—so the property, taken as a whole, will be one of the most valuable in St. Paul Street. The most noticeable improvement in these stores is an arrangement in the basement, combining height of ceiling, light and dryness—three requisites for basements generally found wanting in our Montreal warehouses. During Mr. Lomer's ten years' residence among us, he has carried the fur business to an extent far surpassing that of any private house in Canada. He employs constantly travelling agents, who collect furs, east, as far as Halifax and Labrador; and west, as far as St. Paul, Minnesota. He has branches in New York and Leipzig; and thence trades directly with the trappers and consumers of Greece, Poland and Tartary. The amount of furs annually exported by this one house is very large; and an idea of the extent of the business may be formed from the fact, that, on her first voyage the *Hibernian* took out for him no less than twenty-two tons of furs, all of Canadian growth. The chief exports, however, find their way through his New York branch. During the past season, this one export house has purchased furs, exceeding in value one hundred and sixty thousand dollars, for which they paid cash. It is to be hoped that the transfer of the Hudson's Bay Company's monopoly may serve to bring to our city many wealthy fur merchants to reside among us, and to revive once more the fame of Montreal, as the most extensive fur market on this continent.

GREENE & SONS.

This business was originally established by Mr. Thos. J. Greene, in St. Paul Street, near the Custom House

Square, in 1835. Shortly after, Mr. Wm. Thompson was admitted a partner, and the business was continued under the style of Greene & Thompson until 1845, when Mr. Thompson retired, and Mr. Greene admitted his sons into partnership. Since that period, the business has been carried on under the style of Greene & Sons. Mr. Greene having purchased the extensive premises in St. Paul Street, formerly occupied as the City Bank, converted them into the present suitable and imposing structure, and transferred his business from the premises near the Square. Both of the first founders of this business have since passed away.

The premises 305 and 307 St. Paul Street, occupied by Greene & Sons, are four stories in height facing the street and five in rear, having a frontage of 90 feet, and are built of cut stone. Altogether, the establishment comprises three buildings, which cover an area of 90 by 90 feet. The first flats are occupied as sales rooms and show rooms, and one of them contains the office and counting-house. Greene & Sons are extensively engaged in the manufacture of fur goods. The process which a skin undergoes is something as follows. — When a raw fur comes in, it is, in the first place, softened either by manual or machine labour, in order to remove the flesh still found to adhere. After lying aside for a sufficient time, the skin is cleared of oil by means of sawdust, which material absorbs the oleaginous matter, and, at the same time, adds a lustre to the fur. The skin is now ready to be cut into various styles of men's, women's and children's attire, suited to the means and wants of the wearer, or the requirements of the trade. When the skin has been cut it is sent to the distributing department, in which a number of girls are engaged sewing together different articles in shape. It may be well to notice here that furs are all sewn by hand, and none whatever by machine. The fur having been sewn, passes to the blocking department, where it remains for several hours upon a block, shaped for instance like a boa or muff; this process is necessary, in order that the article may afterwards retain its original con-

tour. When long enough on the blocks the article is sent to the finishing department, where the lining and trimmings are added, and everything done necessary to perfect the fur in all respects. Finally, the furs are sent to the stock room, (an apartment 90 feet in length by 28 feet in breadth, and here they are enclosed in cases, preparatory to transmission to all parts of the country. Greene & Sons use, in their manufactures, a considerable quantity of native Canadian furs; and import also, from Russia, France, England and South America. The firm is largely engaged in the making of silk and felt hats, articles which in former years, used to be imported almost entirely from other countries. The body of a silk hat is formed by machinery, and having been formed into shape is coated with a water-proof composition. The body is then covered with fine silk, the lining and leathers put in, then it is trimmed, curled, and boxed ready for the market. The premises of Greene & Sons are very extensive, nevertheless all the space is required. There are two store rooms on the third flat, facing St. Paul Street, separated by a fire-proof wall, and each 90 by 28 feet. These store rooms are mainly appropriated to the keeping of summer goods, hats, caps, &c. The furs are placed by themselves, and are not ranged on the same shelves as the other articles. The value of the furs and their liability to be attacked by moths, render it necessary to use every precaution against this destructive insect; and a man is employed in doing nothing else but examining the skins, which, however, when put away free of moths are scarcely ever troubled with this pest. One part of the basement is used for colouring and drying skins, and another part for storing away the stock. They manufacture every variety of fur goods. In the busy season they employ about one hundred and fifty persons, keeping about fifty on the premises, and the remainder as out-door workers.

JOHN MARTIN'S HAT AND FUR STORE.

Mr. Martin commenced business in 1853. in Notre Dame Street, in the premises now occupied by McDunough, Muir & Co. The following year he removed to the corner of St. Peter and Notre Dame Streets, and afterwards to St. Paul Street, taking the business of Mr. I. O. Mayer; here he did an exclusively wholesale business until 1857, when he opened a branch store in Notre Dame Street, and afterwards removed his whole business to the premises he at present occupies, and which we now purpose briefly to notice.

The establishment, situated at the corner of Notre Dame and St. Peter streets, is one in which a very large business is transacted, as an inspection of the premises would amply prove. The building is three stories in height, but becoming insufficient for the requirements of his trade, Mr. Martin found it necessary to occupy, for the present, as store-rooms, portions of the premises opposite. The first flat of the establishment proper is appropriated to the purposes of a sale and show room. The assortment of felt and silk hats here on exhibition is large, and comprises every variety known to the trade. There is also an unlimited supply of caps of all prices and sizes. With regard to the articles of straw manufactures, Mr. Martin finds a constantly increasing market, and production can hardly keep pace with demand. There are also a select stock of furs made up, most tastefully, into articles of wearing apparel, always on hand. The second flat of the premises is divided into several apartments, the principal of which are the sample room and a room in which the furs are kept in stock. With regard to the sample room, it may be said, with certainty, that the specimens of hats and caps of felt, silk, cloth and fur, here presented to view, would be hard to surpass anywhere. The stock of furs which Mr. Martin uses in his manufactures is as choice as it is valuable. Particularly noticeable is the skin of the Persian lamb, which he imports by way of Leipsic. There may be some who suppose that the black appear-

ance of the fur of the Persian lamb is communicated by a dye. But such is not the fact; for in its natural state the wool is a rich glossy dark, so dark indeed as to require no deepening of the color by the use of any pigment whatever. These skins are so valuable, that many attempts have been made to rear the lamb in other countries than Persia, but the attempt, from some unexplained cause, has always proved a failure. Mr. Martin manufactures a great many fur caps out of this Persian lambskin, and it is but justice to say that the workmanship is as fine as the material is attractive. He also imports from England considerable quantities of hare-skins, which he converts into what are known as "bosom friends," in other words, protectors for the chest, articles which possess great efficacy in preserving that part of the body from cold, as well as against the dangers arising from too sudden changes of temperature. Of the more valuable furs, such as mink, martin, ermine, squirrel, fitch, &c., &c., there are some splendid specimens. Every country is called upon to furnish a sample of its fur-bearing animals, from the hare and fox of the North Pole, to the monkey of Equatorial Africa. Leaving the second story of the building, where, it was almost forgotten to remark, the office is located, the third story is reached, and this comprises the manufacturing department. This story contains the cutting, sewing and finishing rooms, and the principal branch of the trade here carried on is the making of fur goods, both for men and women's wear, such as hats, fur caps, muffs, boots, etc. In connection with this establishment there is a Felt and Wool Hat factory, capable of turning out ten dozen of finished hats per day. Those hats are steadily advancing in the estimation of the trade, and are now to be found from Gaspe to Sarnia—they are made of the best material, imported expressly by Mr. M., and stiffened by a peculiar process. This stiffening, besides its other advantages, causes the hat to retain its original shape for an indefinite period. The basis of a silk hat is made by machinery, of a very delicate as well as expensive description. In the rough state these hat-

bases are admitted duty free. Mr. Martin devotes as much attention to the manufacture of hats and caps as the importance of the matter, and the imperative demands of fashion, require. He not only applies this attention to civilian, but also to military manufactures, having last winter been called upon to make the fur shakos for the Hochelaga Rifles, and for the Terrebonne Battalion of Volunteers. Mr. Martin, as has been already observed, transacts a large, and it may be added, a growing business, employing, all the year round, about forty persons; in the winter season over sixty persons, male and female, are busily engaged. He also manufactures about ten dozen of silk hats per week all the year round.

HAEUSGEN & GNAEDINGER'S FUR MANUFACTORY.

The premises of the above-named gentlemen are situated in St. Peter Street, No. 39; they are three stories high; are about 80 feet long, by 50 feet wide. A glance at the interior of the premises instantly satisfies the visitor that the business of this firm must of-necessity be a large one. The first flat is occupied by the show and sales-rooms, and also contains the office. The display of manufactured articles is extensive, and comprises everything that can be fabricated out of furs. On the second flat, that part of the room fronting upon St. Peter Street, is also used for the display of goods, more especially ladies' furs. The rear of this room, —by far the larger portion of the apartment— is appropriated to the purposes of a cutting room. Here the skins, after they have gone through the various processes requisite to prepare them for manufacture, are cut up by skillful workmen into the necessary shapes, and are then transferred to the sewing department, where they are rapidly sewed together by women. Without witnessing the different processes furs have to undergo before they are ready to be manufactured, but little idea can be formed of the trouble

which their preparation entails. The different manipulations may be briefly described, as follows:— On the arrival of a lot of raw skins in the dressing shop, they are put into a number of large tubs, made something in the shape of hogsheads, where they are trampled under foot by a number of men until they are quite soft and pliable; this process occupies considerable time, and is called *leathering*. They are then removed and damped with salt water and bran, and allowed to remain in that condition until next morning, when they are passed over a curiously-constructed knife, in order to remove the flesh; after which they are partly dried and stretched, then put into a large revolving hollow wheel, containing mahogany or oakwood sawdust, which effectually removes the grease from the fur, when they are again dried and stretched, and are finally ready for the cutting shop. The furs used are for the most part the products of Canadian animals; but the firm have agents in New York and Europe to procure those best obtained in their respective localities. The skins are generally brought into market in the month of March, and are disposed of mostly in the months of November and December. This firm exports a large quantity of raw furs to different parts of Europe. Messrs. Haenagen & Gnaedinger, being both practical furriers, give each branch of manufacture their special personal superintendence, to which fact much of their success is to be attributed.

HATS, CAPS, FURS, &C.

Messrs. Job C. Thompson & Co., 297 Notre Dame Street, manufacturers and importers of hats, caps and furs, represent one of the oldest houses in the trade, being successors to William Thompson, who for the last half century was engaged in this business. Thompson & Co. are the owners of a large establishment, and their manufactures meet with an extensive sale. The firm has been in the habit of making forage caps and shakos not only for the volunteers of this city, but for those of Upper

Canada as well. They also manufactured the caps used by a portion of the Regular Force now in garrison. These facts speak highly for the reputation of their workshop. It may be fitting to add in this connection that Students' caps are also made on the premises, and that as far as regards the manufacture of hats, caps, and furs, this is one of the largest establishments in the city engaged in a similar business. Thompson & Co. are largely concerned in straw manufactures, and sell a great variety of hats formed of this material. In silk and beaver hats their selections are numerous and varied, and meet with increasing demand. They have also on hand every description of felt hats, of all sizes and at every price. In the matter of furs, Thompson & Co. carry on an important branch of manufacture; and every process through which a skin passes, from the moment it leaves the hands of the trader till it appears in the fur cap or gloves, is represented in this establishment. The preparation of these skins is a work of care and patience. The place where they are manipulated is at the rear of their premises, which, by the way, extend from Notre Dame almost to Great St. James Street. The lamb-skin is first dyed, then divested of whatever particles of flesh may be found to adhere to it; after this it is sprinkled on the inside with meal, then carefully rolled up and placed in a vat, so that the color may have time to dry and become fixed. But several other processes, too long to describe, are found to be necessary before it is fit for the hands of the cap-maker. Thompson & Co. do a large business in the manufacture of raw material, and the transformation which a single skin undergoes is something surprising. All kinds of furs are found here,—the skin of the musk-rat, the seal, the mink, the Persian and Russian lamb, as well as the skins of other animals,—manipulated in great numbers. The Royal Ermine, also, is manufactured on the premises. The skin of the Persian lamb seems to have come into great favor during the last few years; when properly prepared, it produces a very serviceable

article, and is in particular request for the manufacture of ladies' furs. Thompson & Co. make all the goods for sale in their own premises, and import largely from foreign markets. They employ a considerable number of persons, male and female, and transact a large and rapidly increasing business.

CHURCH ORGANS.

From the earliest ages to the present time, music, both vocal and instrumental, has played a most conspicuous part on all the more important and imposing occasions,—devotional, national, ceremonial,—on which men have assembled themselves together. But so far as regards the impression to be made, the solemnity to be instilled, the organ, of all musical instruments yet invented, stands unrivalled. In the Christian church it holds a prominent position as an impressive agency and adjunct in the act of worship. The organ dates back to an early period in the history of the human race; it was known to the Greeks, and from them borrowed by the Romans, but it was only when Christianity had been disseminated over Europe that the instrument began to be fully developed, and its powers to be adequately understood. The organ was introduced into France by Charlemagne, but in the reign of Louis the First, A.D., 515, it was brought to comparative perfection by an Italian priest, who learned the art in Constantinople. An early mention of the organ is in the annals of the year 787, when the Emperor Constantine sent to Pepin, of France, a "musical machine," described as being composed "of pipes and large tubes of tin," and to have imitated the "roaring of thunder, and the warbling of a flute." About the tenth century organs were common in the churches of Italy, Germany and England; and from that time up till now have had expended upon them much labor and great mechanical skill, until at length they seem to be brought as near to perfection as is at all possible. The principal organs in Europe are in Haarlem, Seville, Tours, and Hamburg; the largest

in Rome is in the church of St. John Lateran. For many years the instruments just named were considered the greatest and the best in the world; but two modern organs erected in York and Birmingham surpass them in every respect, as well with regard to dimensions as in musical power. The old makers inclined to the belief that a multiplicity of stops and a forest of pipes would increase the power of the instrument in proportion, but such was not the case as has been frequently proved in modern times. The old makers devoted also much labor and ingenuity to the perfection of a stop called the "*vox humana*," or human voice, but all in vain. The *vox humana* of the organ at Haarlem, was tested by Dr. Burney, a great musical authority, towards the close of the last century, but was pronounced an absurd failure. In modern times organ builders have devoted their energies not to the production of such impossible additions, but to the development of the powers which the organ is found naturally to possess.

In Canada, the art of organ building has been carried out with great success by our fellow townsman, Mr. Samuel R. Warren. His factory was established in Montreal in 1836; and is, we believe, the oldest of the kind in the Province. Mr. Warren first commenced business in the building next the English Hospital, Dorchester Street, where he remained twelve years. From thence he removed to the Donegana buildings, corner of St. Henry and St. Joseph Streets. After remaining there eight years he purchased and removed to the opposite corner. These premises are very extensive and well suited to Mr. Warren's business. Here are to be seen church organs, melodeons, harmoniums and organ harmoniums in every stage of construction; and, truly the view of the interior of an organ, with its manifold pipes, stops, keys and reeds, intermixed, separate, in conjunction, in every possible position, is one not only curious but almost bewildering. A large number of experienced workmen are constantly employed by Mr. Warren, who has reduced his art to such a system that an organ can be constructed in a wonderfully short

It must be said that the album's *W* and *N* tracks meliorate the album's overall quality, but the different styles of these two different parts of *W* are

range from \$60 to \$450. They are constructed with equal care in all their parts, and continued improvements have brought them to a degree of perfection unequalled by any others on this continent. For quality of tone, prompt and reliable action, and beautiful finish, these instruments are not to be surpassed. But a visit to Mr. Warren's establishment will convey a better idea of what he can produce in the manufacture of all these musical instruments than any description can possibly be expected to effect.

BROWN & CHILDS, BOOT AND SHOE MANUFACTURERS.

Prominent among the firms engaged in the above business in this city, is that of Brown & Childs, who carry on their trade in the large cut-stone building at the corner of St. Peter and Lemoine Streets. The premises are four stories in height, exclusive of the basement; the establishment comprises a considerable part of two adjoining buildings. The store proper is very commodious, being 130 feet in depth, by 9 feet in width. The basement is airy, dry and well lighted, and contains a boiler which, in winter time, by means of several thousand feet of pipes, supplies heat to every part of the building. This basement is used for receiving and delivering, and by means of trap doors, goods can be hoisted from here to the highest parts of the building. The first flat is appropriated to the purposes of a general sales-room, and also contains the counting-room. The walls are surrounded with drawers, in which are deposited samples of all the varieties of boots and shoes manufactured, of which there are no fewer than two hundred different kinds. The second flat is where the leather is cut, prior to the pieces being put together. This flat is used entirely for the purpose just mentioned. On leaving this room, the visitor ascends to a third flat, which is situated within the adjacent building to which allusion was made in the beginning of this article.

these flats, it may be added, are separated by iron doors. In the department just mentioned, a large number of men are engaged in cleaning and polishing the boots that have recently been manufactured, and in other ways preparing them for the market. One man in this department has been engaged about fifteen years in the work of cleaning boots in this way. In a room off this place, there is stored away a large stock of fancy upper leathers, finely finished, and of the best material; these are made at the tannery belonging to the firm, of which more anon. Here also, a portion of the manufactured goods are stored away, till taken to the sales-room. On the fifth flat the goods, classified, are placed in cases, each marked on the end, and here they remain ready for the market. Descending to the third flat of the building proper, there is to be witnessed the operation of the uppers of boots being adjusted piece by piece, and the whole then sewn together. For this purpose there are about a hundred sewing machines in constant work, each of which is operated upon by a young woman. There is one machine, in particular, that deserves a line or two in the way of notice; this machine works the eyelets in ladies' boots, and does the thing with the greatest rapidity, and as artistically as could be effected by the human hand. The fourth flat is occupied as a general store room, and contains, among other things, several tons of rags, the clippings of the cloth used for the lining of boots and shoes. The above account refers more to a description of the store of Brown & Childs, and to the simpler operations connected with the making of boots and shoes, than to the entire *modus operandi* itself. To understand, even superficially, the entire process, it will be necessary to detail a few facts with regard to the steam factory of the firm, which is located in King Street. This, certainly, is a very remarkable establishment, and deserving of a more lengthened description than it is possible at present to give. The first floor of the factory contains a number of machines for cutting, rolling, splitting and preparing leather; and here there is also situated a steam engine of twelve-

horse power, which drives the machinery throughout the building. Here there is a machine for cutting out soles, the operation being performed by steam power; a die is placed upon a piece of leather, speedily adjusted, and is then brought down by means of a lever underneath, and the sole is cut out the exact size required, and is ready to be pegged upon the upper. The steam die, as regards accuracy of cutting out, possesses an advantage over others. There is also an ingenious machine for perforating the toes of a sole, the object being when the sole is pegged, to have these holes filled, not with pegs, but with zinc sprigs. There is a machine—or press rather—to adapt the sole to the last before it is put on; and also a press, with a power of some tons, for forcing together the different scraps of leather which go to make up the heel of a boot or shoe; first of all the heel, made up of different pieces of leather, is pegged in one or two places; it is then put upon a kind of table, when a curved iron arm sweeps it under the press, and then sweeps it out again; every piece of leather is joined to its fellow with the greatest possible tenacity. There are various other machines in this department, but to describe their various operations would fill the side of a newspaper. The second flat is known as the pegging room; there are six machines for this purpose, and as for efficiency, novelty and ingenuity, they are hardly to be surpassed by any machines of similar size used in any branch of manufacture whatever. The boot or shoe is placed upon a curved carriage, similar to the shape of the sole; this little carriage has a number of teeth set around it, and these teeth are placed in gear with a cog wheel which runs right below the borer and driver. The machine is started, the boot is carried rapidly along by the cog, and while in motion the borer instantaneously makes the hole, and the driver knocks in the peg. The process is one as interesting as the most curious would desire to witness. There is also a machine for lasting shoes, before they are given over to be pegged. These lasting machines operate upon shoes and boots of every size, and each of them prepares from

ten to twelve dozen per day, while a man could only do four. There is also on this flat an emery wheel, for smoothing the soles of boots after they have been pegged upon the uppers; and, for carrying out a supplementary process there is a bone machine, for adding the last touch of polish. The third flat of the factory is used for the purpose of lasting and finishing thick boots, operations which are performed with the same dispatch as characterizes the other processes in this establishment. Before taking leave of this factory, one may be allowed to observe that the operations conducted within it—and all by the aid of steam—are as interesting as any process in any other branch of manufacture could possibly be. A few years ago a person who would hazard the conjecture that boots and shoes might be made by steam, would have been treated with as much ridicule as were those who first mooted the theory that vessels propelled by steam would be able to cross the Atlantic. But experience has taught that there is scarcely any manufacture in which steam may not be used as the great motive power; and although it would appear at first sight that the employment of this agent must have the effect of curtailing human labour, or, in a great measure dispensing with it, the contrary has been the case, for it has so far been found that increase of supply meets with a corresponding increase of demand, on account of the cheapness which must always accompany superior facilities for production as well as energetic competition. The tannery of Messrs. Brown & Childs is situated at the corner of Cannon and Beventure Streets. The establishment proper is 100 feet long by 15 feet in width, and taken as a whole the tannery covers fully an acre of ground, extending as it does from Cannon to Camp Streets. The houses of the workmen are in the immediate vicinity. On entering the tannery the first object that attracts attention is a tanning mill, constructed on a new principle: two large wooden hammers, with horizontal action, are placed in a large trough more than half full of liquid. The hides are then thrown on the machine set in motion, and in a short time the

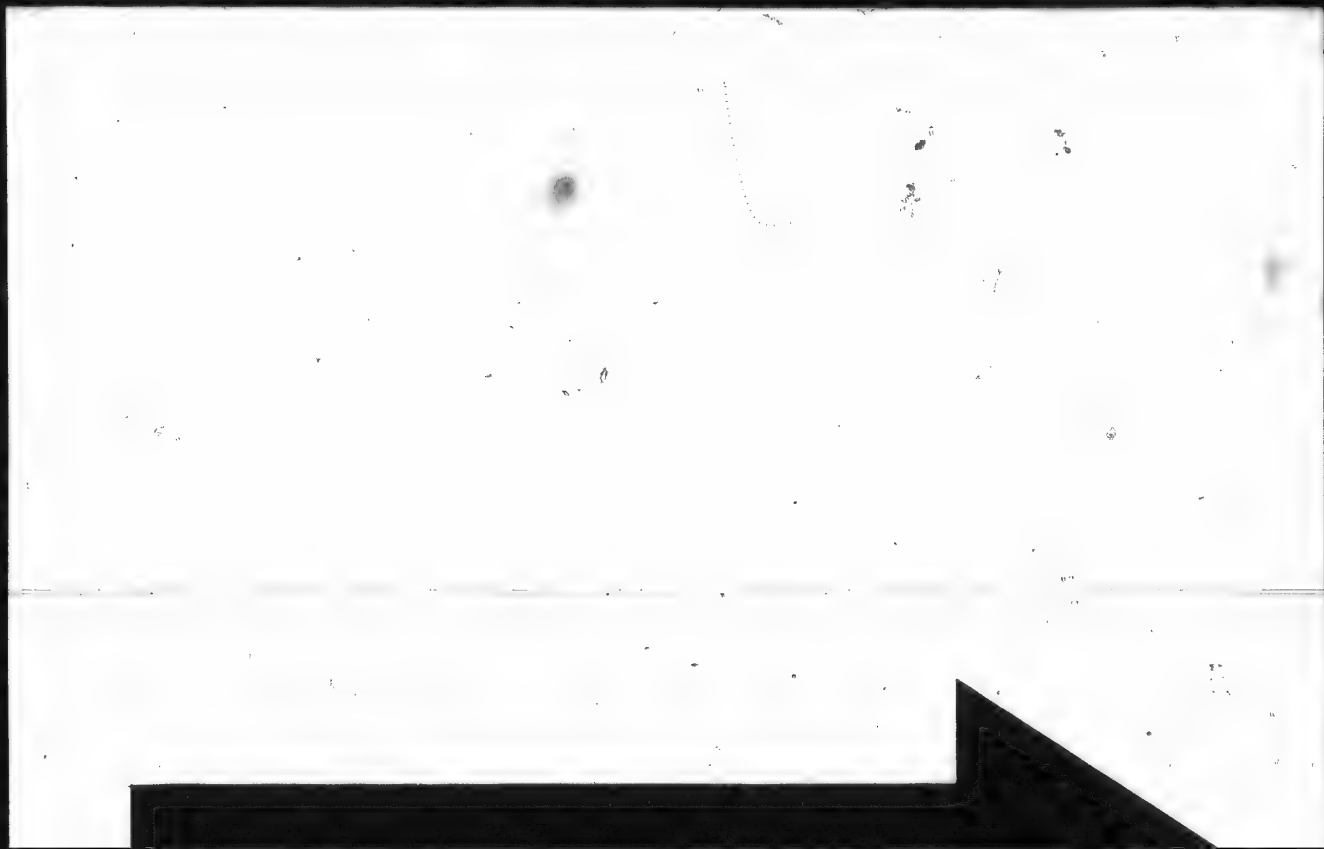
hides, pummelled on every side and tossed over and over again, are cleaned from all impurities and rendered fit to absorb the tanning liquor. This machine is situated on the first flat, and so is the beam room, where the skins are thrown into the lime vats, and thence they are taken to the drench. The drench is conducted upon an improved principle, by which a process generally occupying eight or ten days is accomplished in two days, the work being performed as well if not better. The next object of interest is a press, a novelty in the business, and having a power of some sixty tons; this press is for the purpose of squeezing the moisture out of the hides that have been tanned, and causing them to dry immediately. There is a machine on this same flat that deserves a few words of notice and commendation; it is the invention of Mr. Cowie, (foreman of the establishment) and Mr. Allison, secured by letters patent, and is styled a bark rosser; this apparatus takes off the external or worthless parts of the bark, leaving only that portion which possesses the properties for tanning. The process is something as follows:—A piece of bark (the machine having been put in motion) is placed between two toothed rollers, which draw it over a sharp knife, and when it comes out on the other side all the excrescences have been cut away, and the sheet of bark is ready to be thrown into the mill and ground for the leaching vats, to assist in the preparation of the tanning liquid. The refuse of the bark is used to feed the boiler, which drives the engine that supplies the motive power of the tannery. On this same flat there are seven vats for leaching the tanning liquid; the facilities for extracting this liquid are so great that a larger quantity of stock can be turned out than in many much larger concerns. A number of steam pipes run from the boiler to the vats, and not only assist in leaching the bark, but serve to warm the building in the winter time. When it is found necessary to do so, the liquid in the leaching vats is turned into a large reservoir, whence it is pumped, by machinery, into the vats where the leather is tanned. On the outside of the building there

are two immense coolers, where, if the liquid is required to be used faster than it cools in the leaching vats, it is exposed to the action of the atmosphere. In the tannery, altogether, there are thirty-three vats, exclusive of the seven leaches and the two coolers. There is consumed every year about a thousand cords of bark, most of which comes by boat and cars from different sections of the bark growing country. On the second flat of the tannery the hides receive the finishing touches, prior to their being sent out for manufacture into boots and shoes. Here there are several interesting processes carried on, but want of space compels them to go undescribed. There is a machine for splitting sides of leather, fifty-two inches in length. The side is put between two rollers and then meets with a knife as keen in the edge as a razor; the knife cuts the side in two throughout its whole extent, easily, evenly, and accurately. In proximity to this machine is a self-acting emery wheel, used for setting the knife in perfect cutting order. On this same second flat, as has been already said, the leather undergoes the finishing operations. The enamelled leather is coated here, and then dried in an oven with a temperature of 150 degrees. In the finishing shop, which is supplied with marble tables four feet by twelve, and in the carrying shop, which has the same conveniences, the hide goes through a variety of manipulations before it is fit for the shoe factory. The third flat of the building is mainly used as a drying loft for the enamelled leather. In the tannery everything is well arranged for carrying on the business; and although each process leaves a certain amount of refuse, nothing is suffered to go to loss. The exhausted bark feeds the boiler; the lime, when used up as a chemical agent, is sold for manure; and thus everything is turned to some account. There are thirty men employed here, fifty in the boot and shoe factory in Griffintown, and 200 men and women in the store in Lemoine Street, besides about 350 who do out-door work for the firm. The boot and shoe trade of Montreal constitutes an important part of its manufacturing industry; and prominent among those

who have aided in bringing this business to its present stage of development, must be recorded the names of Messrs. Brown & Childs.

MANUFACTURE OF SAFES.

The establishment of R. Kershaw & Co., 82 and 84 St. Francois Xavier street, is the only place in the lower Province devoted to the manufacture of fire and burglar proof safes. This art is one which, if carried out successfully, is of the very greatest importance to the mechanical portion of the community. Of late days the efforts of burglars have been aided by such mechanical ingenuity, that it has been found exceedingly difficult to baffle their designs, even where care and precaution in the strictest sense, have been resorted to. The preservation of money, plate, and other valuables from the effects of fire, has engaged the attention of safe makers for years back; and all that was to be done in this matter has perhaps been tried, and the results of the experiments embodied in the different safes now before the public. The safes made by Kershaw & Co., are warranted both fire and burglar proof, and the manufacturer produces certificates to this effect from Banks, Exchange offices, and various mercantile establishments. To produce a first-rate safe a good deal of labor and experience is necessary; and it must be said that so far as regards skill, Kershaw & Co. have abundance of it, as they have been engaged in the business about a quarter of a century. They have a place in Boston, from which a vast number of safes have found their way all over the United States; in this city their establishment is a large one extending from Fortification Lane to Craig Street; and safes which have been manufactured here are now distributed over the whole Province. The processes through which a safe has to go before it is ready for the bank, vault or counting room, are far too complicated to mention. It is easy however to describe how the safes constructed in this place are rendered fire and burglar proof. Take for example a large safe now making for a public office. After the body of





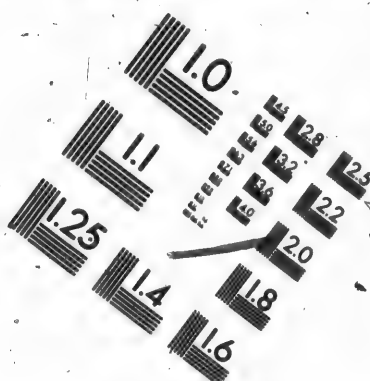
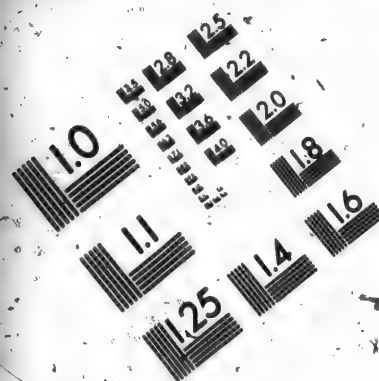
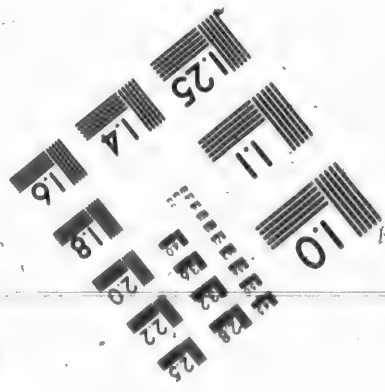
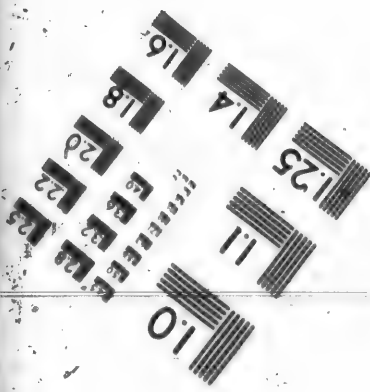
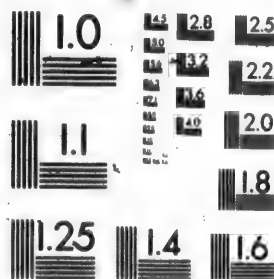


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the safe has been put together, it is lined first with a plate of iron, then a plate of steel and another of iron; these three are then welded together, and all the rivets are on the inside, so that it is impossible they can be drawn. The whole mass is finally tempered to such a degree that it is rendered hard enough to defy the penetration of any drill or tool whatever. The door of the safe is an inch and a half in thickness, and provided with a powder proof combination lock. This lock is a marvel of ingenuity, and of beauty of construction; the key hole is so constructed that, where fastened, the machinery of the lock is completely protected from external violence; and the introduction of powder is altogether impossible. These safes are also lined with a particular composition only known to the makers: and possessing the property of being incombustible. Altogether, these safes seem to afford as much protection against fires and burglars as can possibly be secured. Kershaw & Co. also construct plate safes for dwellings and churches. These are not only strongly made, but on the outside are so highly ornamented that, painted as they are of oak color, they are hard to be distinguished from a piece of furniture. Some of them are finished as side-boards or book cases, and made of any size to fit the place where it is designed to put them. They are elegantly adapted for the dining room; and besides having all the convenience of an ordinary side-board, they afford perfect protection to plate against the attempts of burglars. It may be in place to mention here that there is a great advantage in purchasing these Canadian-made safes. American safes have to pay a duty of twenty per cent, and the charge for transit is naturally high. To lessen this latter drawback as much as possible, there is great temptation to make the safes lighter than they should be to prevent the possibility of loss falling on the purchaser. But perfect security may be attained, and an important branch of Canadian industry stimulated at the same time, by purchasing safes from those whose position and experience are sufficient guarantee for every article that leaves their workshop.

HILTON'S CABINET WAREHOUSE.

This business was first commenced by Mr. John Hilton in 1820, in Jacques Cartier Square, in rear of the building afterwards known as S. raphino's Hotel. At this period this location was considered one of the best in the city, being immediately in front of the then New Market, which ran from Notre Dame to St. Paul Street. In 1823 Mr. Hilton moved into a building situated on Place d'Armes, where the Montreal Bank now stands. Here he entered into co-partnership with Mr. Edmond Baird, and the business was carried on under the firm of Hilton & Baird, until 1845, when a separation took place. During this time the business premises were twice removed, first in 1826, to the building now occupied as the Cosmopolitan Hotel, and in 1828, to the opposite side of the Square, where H. J. Toupin's buildings now stand. In 1845, on the retirement of Mr. Baird, Mr. Wm. Hilton became a member of the firm. In 1854 they removed to the premises they now own and occupy, No. 25 Great St. James Street, which we now propose to notice. The building extends from Great St. James Street to Fortification Lane, having a depth of 120 feet, and a width of 30 feet; it is three stories high on St. James Street, and six on Fortification Lane. This warehouse has long been known for the variety of its productions in this line of manufacture, for their excellence of workmanship, and their cheapness. A visit through the six stories constituting the show-rooms will attest the correctness of the assertion that has just been put forward. There are to be found in this establishment articles of furniture of every size, material and design. Among the specimens which will first attract the attention of the spectator are some beautiful pieces of handiwork, suitable for glass frames and window cornices. They are constructed of rosewood, highly polished, carved and inlaid with gilding; and for the drawing-room nothing could be more appropriate or ornamental. For the dining-room there are frames of a singular pattern, and finished in the same style, only that

they are made of mahogany or walnut. These frames are now in extensive use in London, Paris and New York; and certainly, if splendor and taste are considered to be requisites of a drawing-room, nothing could be better adapted to such purposes than the articles already mentioned. There is a splendid assortment of library furniture on exhibition. The Messrs. Hilton were employed to furnish the library of Mr. Hugh Allan's splendid residence at the mountain; and those who are qualified to judge, have pronounced this particular apartment to be, as far as cabinet-work is concerned, the most magnificently fitted up of any in Canada. Among the bed room furniture are some fine bedsteads, made of maple, with rosewood mountings. The Messrs. Hilton manufacture chairs, sofas, etc., of all descriptions.— They are extensively engaged in the production of cane bottomed chairs. Formerly these were imported in large quantities from the United States; but now they can be made in Canada, in any number, of first-rate material, and very cheap. The firm have also on exhibition, etageres in every variety, mantle and pier glasses, ladies' secretoires, and cornices of every pattern. They also import embroidered repp curtains of all styles. Some of these patterns are of rare beauty, so also are the Pekin cloths, used for furniture covering and for pianos. The Messrs. Hilton are, we are told, the only importers of these beautiful fabrics in the city. Some of their mahogany side-boards are rarities in their way; they seem to have lavished upon them the best of workmanship, and the carving challenges admiration for beauty of design and carefulness in execution. The Messrs. Hilton employ a good deal of labor in their upholstery department. The arrangements for carrying out this particular branch of their business are quite extensive, and show the development to which it has attained under their management. They are also largely employed in the manufacture of looking-glasses. Of these they make immense numbers, which find their way all over the Province, from Gaspé to Sarnia. Their apparatus for silvering glass enables them to make any quan-

tity of these mirrors ; this process of silvering is a very interesting one, and can be carried out in the case of small mirrors with great rapidity. First of all, a square of tin-foil, the size of the glass, is laid upon a table, and covered with quick-silver, with which it at once amalgamates. A slip of paper is then laid over this, and over the paper a plate of glass. The glass is pressed firmly down with one hand, and the paper intervening between it and the tin-foil withdrawn with the other; the amalgamated quick-silver and the tin-foil then adhere to the glass, and the process is completed. In this establishment there is an apparatus for silvering plate glass of any size ; it is the largest machine of the kind in the Province. The glass which is thus prepared for mirrors is of the best description ; and is chiefly imported by the Messrs. Hilton from England and France.

A visit to the manufactory of Messrs. Hilton, situated on Alexander Street, serves better than anything else to convey an accurate idea of the extent of their business, and the facilities they possess for carrying it out in all its branches, how so much can be done and so cheaply, with the aid of machinery. The buildings are large and well adapted for the purpose ; and the number of men engaged is about eighty. On the first floor the steam engine is located ; it is of twelve horse-power, and by means of belts running upwards through the ceiling, drives the necessary machinery on the upper flats. The visitor is bewildered on entering by the number of belts intersecting each other at every step, by the din of wheels, the screech of saws, and the whirr of rapidly revolving bits. At one bench is to be seen a lathe, into which a square of wood is this moment inserted, and in a few seconds comes out a handsomely turned post, round and symmetrical. Here a grooving machine takes a piece of stout board between its teeth, and in a few seconds has grooved on both sides, the upper and under, what it would take hand labor an hour to perform. The circular saw tears in a straight line through a plank what the human arm would require hours to separate. The upright saw, not broader than

the smallest blade of a pen-knife, works up and down incessantly. There is no geometric curve or angle that it will fail to cut with lightning rapidity, let the wood be ever so tenacious; it is a wonderful piece of mechanism, and its effective power astonishing in the extreme. Next comes the planing machine. A piece of walnut plank over two and a half feet broad, and four feet long is fastened securely to a movable iron bed. Then it is drawn under the plane; this is composed of two sharp steel teeth, chisels, in fact, revolving horizontally with great impetuosity, and placed a considerable distance asunder. The board is moved backward and forward under the plane; if it is hard wood, a spark now and then will fly out, indicating the irresistible force and the strong resistance; but the machine overcomes every obstacle, and in a minute or two the board emerges, smooth and of equal surface in every part. Thus there is accomplished in a fraction of time what the human arm could not so efficiently perform in hours. Then there is the moulding machine, which moulds curves of every kind with astonishing rapidity; and leaves its indentations on the hardest wood, as if it were friable as chalk. The following is an enumeration of some of the machines, incessantly at work in this factory:—planing machine, surface machine, vertical sawing machine, moulding sticker, shaping and moulding do, circular saws, grooving saws, turning lathes, morticing lathes, tennening lathes. The machinery in this workshop is all of a modern character, and is capable of turning out finished material in the most rapid manner conceivable. There is a drying room connected with the establishment, to which the exhaust steam from the engine-house is conveyed by an underground pipe.—Here the wood, before going to the workshop, is thoroughly seasoned, and by a process nowhere else in requisition in this Province. Separated from the machinery department by a yard, is the finishing and polishing department. Here the furniture receives the finishing touches preparatory to being placed in the market. In this building also is the carvers' shop, where a num-

ber of skilful workmen are busily engaged on those beautiful designs of birds, fruits, flowers, etc., which we see ornamenting first-rate specimens of the cabinet maker's art. Some of these patterns are of great beauty, and require for proper and effective development, great skill and long experience. There is now one branch of cabinet making, carried out by this firm, which is nowhere else practiced in this Province—enamelling. They are engaged in the manufacture of chairs, the backs of which are inlaid with ivory and mother of pearl, and which when finished combine the useful and ornamental in a manner rarely to be met with; as specimens of mechanical perfection in this business, they cannot be excelled. Enough now has, perhaps, been said to show that the Messrs. Hilton possess qualities for carrying out their trade scarcely to be surpassed in Canada.

MANUFACTURE OF GLOVES.

The establishment of Mr. De Witt, where the manufacture of Gloves is carried on, is situated on the south side of the Lachine Canal, at the St. Gabriel Locks. The building is two stories and a half in height on the side facing the Canal, and in rear is three stories and a half; it is sixty feet in length by thirty in width. Every process a hide undergoes, from the time it enters the place in its natural state, until it leaves, transformed into a beautiful buckskin glove, is represented in this manufactory. Mr. De Witt procures the raw skins in large quantities from Canada West, and also buys in the markets of New York and the Western States. In the basement of the building there are four lime vats, and two outside; in these the hides are placed first of all, and afterwards go through the customary manipulations required for tanning leather. After being tanned, the hide is taken to the cutting shop, on the first floor, and a machine at one stroke takes out pieces the shape of the thumb and fingers of the human hand. These pieces are conveyed to an adjacent room, where a

number of young women, operating on sewing machines, stitch them together with great rapidity. The glove, of course, is sewn upon the inside, but is turned by means of an ingenious apparatus. The above is an imperfect sketch of the way in which Mr. De Witt manufactures the finest white buckskin military and other gloves—equal in every respect to the best that can be imported. Buckskin is the principal material used in this establishment for the manufacture of gloves. With the exception of the finer qualities, which are stitched by hand, they are all put together by sewing machines. Employment is given to about a dozen men and about sixty women, and the establishment is capable of turning out about 100 dozen pairs of gloves in the course of a week. The manufactured articles are only sold to wholesale dealers. The second flat of the building is used as a store room, where the gloves ready for market are packed away. Here also is kept a species of leather made by Mr. De Witt and known as Calf-kid. Mr. De Witt introduced the manufacture of this article in the Spring of 1860. It is a beautiful material, much prized by boot and shoe makers for its strength and pliability; and because it possesses the important advantage of being water proof, in which respect it is superior to any imported. The factory contains every facility for carrying on the various branches of this business, which, though but a few years established, is already very large and rapidly increasing. Mr. De Witt is the only manufacturer of buckskin gloves in the country.

IRON PRODUCTS.

For iron products of all descriptions, the establishment of Meilleur & Co., 71 Great St. James street, will be found to be well supplied. The article that, at first sight, will attract most attention, is "Going's European Ranges." They are of family and hotel sizes, and in respect to utility and convenience, are admirably constructed. They contain separate compartments, for the purposes of baking, cooking, roasting, etc.; they are

furnished besides with an arrangement by which water may be kept constantly warm. In a word, these Ranges seem to possess every requisite that any kitchen, the largest or smallest, can possibly demand. The "Metropolitan Stove" must be seen, in order that its advantages may be fully appreciated; the same remark will equally apply to the cooking, parlor and hall stoves manufactured by this firm. The iron bedsteads they construct are well worthy of attention, and deserve to be widely patronized. They obtained the first prize at the recent Provincial Exhibition held in this city. They are light, well made, and handsomely ornamented; and, when pressed upon, yield with ready elasticity. In summer time the advantages specially offered by these bedsteads, both on the ground of coolness and convenience, can be easily understood. In this connection it may be well to mention that the firm keep on hand a supply of refrigerators and meat safes, ranging in price from nine to thirty dollars. These are constructed on scientific principles, and in the hottest season, preserve fresh and untainted, any edible whatever. They are of a convenient size, take up little room, and at the same time are strong and substantial. They are grained in imitation of oak, and, in addition to their other qualities, present a pleasant and ornamental appearance. Meilleur & Co. manufacture every description of iron railing, besides ornamental garden furniture. The garden chairs that are produced in their workshops combine the elasticity of a sofa with the durability of iron. They are easily moved from place to place; and, being painted green and highly decorated, serve to set off either garden or lawn. In parks and other places of public resort, these chairs are admitted to be of the greatest possible convenience. Meilleur & Co. also turn out iron fountains, for public and private use, specimens of which are to be seen in Jacques Cartier Square, Custom House Square, and in several of the public and private gardens throughout the city, and, although capacious and of beautiful workmanship, they are remarkably cheap. One of these fountains, con-

tinuously at play, may be witnessed at all hours of the day in the window of their show-room, Great St. James street. These fountains are of very beautiful design, and would be an ornament anywhere. The firm also undertakes the casting of iron statuary, the superiority of which, in a climate such as ours, is too apparent to require comment. There is to be seen in Meilleur & Co.'s show-rooms other articles of ornament and utility, possessing the essential requisites of excellence and cheapness.

BOOT AND SHOE ESTABLISHMENT OF SCHOLLES & AMES.

This is a large four story building, fronting on St. Peter Street, and occupying the upper stories of two adjoining buildings, having a rear entrance from St. Paul Street. The business was first established in 1855, in the premises No. 175 Notre Dame Street, by Mr. S. D. Childs and Mr. F. Scholes, under the style and firm of Childs & Scholes. In 1857 they removed to No. 15 St. Peter Street; and in 1859, finding these premises too small for their business, which was rapidly increasing, they again removed to the adjoining building, retaining however the upper stories of the building previously occupied. In 1857, Mr. E. F. Ames became a partner in the business, and the style of the firm changed to that of Childs, Scholes & Ames. In 1860, Mr. Childs died, and the business has since been carried on by the remaining partners, under the firm of Scholes & Ames. The premises are very extensive, and the business transacted proportionably large. The first floor is occupied by manufactured work, the greater part of which is contained in cases and long rows of drawers, and comprising not fewer than two hundred varieties of boots and shoes; these are of every class, and of every price. Shoes for infants, for boys, for men,—in fact for every age, and suited to those in every position in life. Here are to be found the light, symmetrical, finely-worked boot and shoe of the lady, formed of the softest ma-

terial; the delicate French calf-skin, and the pliable cloth. There are to be found here, also, the rough, strong-made boot of the mechanic, adapted to all weathers, and in endurance resembling his own muscle; together with the brogan, which seems to be formed upon the principle of never giving way. The office, also, is situated on this floor. On the second flat there is a great deal of machinery for the manufacture of boots and shoes. There is a machine for cutting out soles; another for cutting out heels of any size; another for splitting sole leather; another for rolling and stretching sole leather; another for cutting heel-stiffeners; another for splitting upper leather. In this department there is everything necessary for preparing by machinery the material of a boot or shoe, which are then given out, requiring only to be *soled*. On the third story a number of men are employed to clean and polish the manufactured articles. Here also are several machines at work. This storey contains a great number of boxes, in which are placed assorted sizes of boots and shoes ready for market. This flat is also used as a ware-room, for storing away fine leather. On the fourth story there is a machine for closing boots; one for making wax-ends; one for putting eyelets into shoes; also a machine for sewing uppers with double seams. There is also on this flat a large number of young women, constantly employed in operating on sewing machines. The work on which they are engaged is principally the closing of the uppers of ladies' boots, in leather as well as cloth. The process is rapidly performed, and the work beautifully done. Messrs. Scholes & Ames have introduced an improvement into that particular kind of shoe known as the "brogan," which will prove, no doubt, very advantageous. This consists in rivetting at their junction on both sides with two strong rivets, both the upper and the quarter, thus making those portions of the brogan exceedingly durable. Messrs. Scholes & Ames find employment for about one hundred persons on their premises, and over three hundred outside; and their operatives can turn out between three and four thous-

and pairs of boots and shoes in the course of a week. Their manufactures are in great demand in all parts of the Province. It is not too much to say that the reputation enjoyed by this firm for the excellence of their work and superiority of material used, is unsurpassed in this city. It is impossible, in such a brief notice, to do anything like justice to this establishment, which, for extent, convenience, and situation, takes rank among the first in the Boot and Shoe trade.

APOTHECARIES' HALL, NOTRE DAME STREET.

This wholesale and retail drug establishment is too well known to render necessary any description of its location or exterior. The business was first introduced by Mr. Alfred Savage, some thirty years ago; but, eight years since, it fell into the hands of Messrs. Lamplough & Campbell, who continued it for two years in the old place near the Court House; thence they removed to the premises they now occupy, and which were built by themselves. The building is four stories in height, exclusive of the basement. In the cellar are stored away a great quantity of barrels containing salad oil, syrup, cod liver oil, dye stuffs and alcohol. The firm do an extensive business in the matter of cod liver oil. In the cellar are situated three soda water fountains, which are used in the production of the beverage of that name sold at the counter. In an apartment off the cellar a considerable quantity of essential oils—recognized at a distance by their peculiarly pungent odor—are kept secured. The first floor is occupied by the store, and at the rear is the counting-house. The store is as remarkable for the variety of its contents as for its extent and the neatness and regularity which predominate everywhere. To attempt, however, to give anything like a description in detail, is a matter of impossibility. The second flat contains assortments of surgical instruments of every kind; the firm make a speciality of this branch of their business. Here there is a variety of druggists' sundries, and any amount of hair brushes and combs.

As regards combs, it would seem that the vulcanized India rubber combs made in Scotland are superior to those made in the United States, being better in finish, as well as lower in price. Here also are all descriptions of English fancy soaps. Lamplough & Campbell have every facility for carrying on their business in the wholesale line; for in this room there are materials for stocking a country druggist's store with everything requisite, at the very briefest notice. The third flat is devoted to the storage of glass of every description; there is also to be noticed here, the peculiarity of iron mortars for sale. There is a large quantity of French perfume bottles, which surpass any manufactured in America, and are cheaper than those made in England. On the fourth flat an immense number of corks of every size, imported in their manufactured state from Marseilles in France, and some also from England. The attempt was made in this city, some years ago, to import corkwood in its natural state and "cut" it here; but the effort failed. In this flat, also, there are stored away a great variety of sponges, garden and farm seeds, and quantities of weightier articles. As a whole, the firm of Lamplough & Campbell seem to have left nothing neglected that would aid in successfully establishing their business.

MANUFACTURE OF PLAIN AND FANCY BISCUITS.

The manufactory of Mr. John MacKinnon, who is largely engaged in the above mentioned branch of business, is situated outside the St. Joseph street Toll-Gate. The operations are all carried out by steam, and the processes through which the flour has to go from the time it leaves the barrel until it is packed up in boxes ready for market, are of sufficient interest to merit a brief description. The second story is where the first operation takes place. The flour, after having been made into dough, is placed within a large stationary cylinder, in the interior of which there is a toothed ap-

paratus of singular construction. A belt is now shifted upon the wheel that sets the apparatus in motion, and the dough is thoroughly worked; it then descends by a spout to the first story, when it passes through another process, by entering into what is called a mixing machine, which consists of four fluted rollers, two above and two below, the dough entering by means of a hopper at the top. The material is by this operation thoroughly combined, and comes out in the form of a web. Then the dough enters a breaking machine, to acquire a still greater consistency. Another machine rolls it out in sheets, smooth, and white, almost as marble. The last process is carried out by the biscuit-cutting machine, which is furnished with rollers so adjusted as to make the dough a proper thickness; after the substance has passed through these rollers, the machine cuts them, by means of dies, into circular shapes. There is a curious machine, the invention of Mr. MacKinnon, and in use only at his establishment; it is employed in the making of what are known as "Queen's Biscuits," edibles of fantastic shapes, but most palatable withal. When the dough comes out of this machine, it has much the appearance of a long strip; and, while in this form, is made into various shapes. One boy can work this machine, which is able to do what six men could not perform. The waste pieces of dough, resulting from the different processes, are re-rolled, and converted into biscuit. When the biscuits have been cut out of the sheets of dough, they are placed in pans, and sent to the ovens, of which there are none of the same description in Canada. They are constructed under the supervision of Mr. MacKinnon, and better adapted for the baking of biscuit than any others in the country. They are distinguished by this peculiarity, that they are heated, not by any fires within themselves, but by flues both above and below. The result of this arrangement is, that no dirt, whatever, can become intermixed with the biscuit while they are baking—a very important circumstance. The ovens are large, occupying, as they do, about the half of the first flat. After the biscuits are sufficiently

baked, they are taken up stairs and packed in boxes ready for the market. Mr. MacKinnon manufactures thirty different kinds of biscuits, and, in the different processes, employs about a dozen persons. The machinery is driven by an engine of eight-horse power. The manufactory is 26 feet in length, by 35 in breadth, but the ground on which it stands occupies an acre, and Mr. MacKinnon has the intention of further extending his premises, and adding to the power of his machinery.

JAMES HOLIDAY & BRO., PRODUCE STORES, CANAL BASIN.

There is no interest more largely or intimately connected with the prosperity of the country and this city than the grain trade, of which Montreal has become the *entrepot* of Canada. With the development of that trade to its present extent, the name of Mr. Young must be ever identified, as with various enterprises having for their object the attraction of a larger portion of the Western produce trade to the St. Lawrence, by the creation of proper facilities for its accommodation at this and other points of the route. Among the facilities required for this trade at Montreal, are ample and convenient stores, grain elevators, &c., to give accommodation to the produce in transit to the ocean, to load and unload vessels at the least expense and with the greatest rapidity. Fully alive to the importance of this subject, a number of flour stores and elevators have been erected within the past few years, on the best sites, in the vicinity of the Canal Basins and elsewhere, amongst which the extensive range of stores, bounded on one side by Wellington Street, and on the other by the Lachine Canal, the rear facing the Government Sheds, and known as "Young's Buildings," are the most prominent. The buildings, which are occupied by Messrs. Holiday Bros., are 293 feet in length, with a breadth of 138 feet, and are built of stone, in the most solid and substantial manner,—massive beams and posts support the floors, and nothing has been omitted requisite to render

the building sufficiently strong to support the immense weight of produce at all times stored within their walls. On the ground floor there are 26 large double doors, for the reception and discharge of flour and other produce; through those facing the Canal, over slides or gangways, vessels are loaded or unloaded with flour. In the upper stories there are also a large number of doorways for the same object, and as the rear of the stores is only a few feet from the edge of the Canal Basin, vessels can come alongside and be unloaded or loaded with the greatest expedition, and at the least possible expense. The building is lighted by 290 windows, and these, with the numerous doors, afford excellent opportunity for ventilation, an advantage for which these stores are noted, grain never heating, and flour never souring, when received in good condition. Including the basement, there are five stories, each divided into eight sections; these sections are spacious, and each a separate and distinct compartment from the other. The basement story is set apart for bonded goods, or West India produce, and at present contains a large quantity of sugar, crates of earthenware, and various kinds of heavy merchandise in bond. The second story is similar to the first in general arrangement, and with the third and fourth is devoted to the storage of flour. An idea of the great extent of the buildings may be formed from the fact that there is accommodation for 100,000 barrels of flour, 150,000 bushels of wheat, and 2,000 hogsheads of sugar, at any one time. The fifth story, which is of the same dimensions and general character as the others, is devoted to the storage of grain. Here is the only opening in the massive wall, which divides the buildings into two equal portions; through this opening, which is secured by huge double windows, communication is had from one end of the building to the other. On this story there is a grain elevator, capable of taking in from, or discharging into the holds of vessels, between 1,300 and 1,500 bushels an hour. There is generally a vast quantity of grain in the upper stories, owners finding it to their advantage to have

their grain spread out on the cool and spacious floors, the upper two of which afford room for 150,000 bushels of wheat, without the necessity of heaping it higher than 4½ or 5 feet. There are six flour elevators in these stores, which raise flour as high as the third story. Each elevator is provided with six arms, which revolve as the elevators are worked, depositing the barrels at any place required with an elevating capacity of 100 barrels in 12 minutes. In addition to these conveniences, there are two "Flour Decenders," by each of which 100 barrels can be lowered in about 12 minutes. Besides the above useful appliances in relation to the storage of flour and grain in these buildings, on the front facing Wellington Street there are slides from each story, enabling men to deliver flour rapidly on the ground from any of the flats. The barrel glides swiftly from top to bottom with the least possible strain or injury, to be carted where required. In addition to the elevators before mentioned, there is a grain elevator worked when the others are in operation, with a lifting power of 300 bushels per hour. Each flat of the building is connected by spouts, by means of which grain is lowered from one to the other. If at any time there is any appearance of grain heating, it is let down through these spouts, and spread over different floors, being greatly benefitted by the operation. It is lowered in the same way to the reception hopper, when required for shipment, being thence put aboard by the ship elevator. 150,000 bushels of wheat and 100,000 barrels of flour have often found accommodation in these stores. The steam engine by which the elevators are worked, is in a fire-proof compartment in the basement, about the centre of the buildings. The engine is of 15 horse-power, manufactured by Mr. Brush, and for which he received the prize at the last Provincial Exhibition. In the east wing of the building, on the second story, is a suite of offices, being those occupied by Messrs. Holiday; Mr. R. D. Collis, Flour Inspector's Office, is also in this building. A Custom House Officer is constantly on the premises. The spirited and enterprising occu-

pants commenced business, 21 years ago, as coopers in King Street, afterwards taking the stores known as Jones' Stores, nearly opposite the present premises, which they left subsequently, to take charge of Mr. Young's extensive buildings. In connection with the storage business, Messrs. Holiday have an extensive cooperage establishment, which affords them every possible convenience for prosecuting their extensive business as warehousemen; this establishment is separate and distinct from the warehouses and well deserving a special notice, which will be given it hereafter. In addition to the conveniences already mentioned for the reception and delivery of goods, it is also important to state that a branch of the Grand Trunk Railway runs alongside the building in winter, so that goods brought by rail may be stored with the greatest dispatch and at the least possible expense, and flour or grain received too late for shipment by the St. Lawrence, can be stored in these buildings and sent by rail to Portland during the winter months.

MR. GILBERT'S FOUNDRY.

This establishment occupies a portion of the building owned by Mr. Cantin, and known to mechanics over the Province as the Canada Marine Works. The visitor on entering the foundry is first conducted to the office, where the plans and drawings are prepared. The office leads into the machine shop, where a very interesting scene presents itself. Here there is every known appliance for the finishing of iron—lathes, planes, drilling and shaping machines, &c. These are driven by steam power, and their mode of operation seems astonishing to a stranger. A huge, rounded mass of metal, for instance, weighing three tons, and intended for a rolling mill, has just come from the bed of sand in which it has been moulded. The surface is rough, and it is necessary that the roller should be perfectly smooth. As soon, then, as the mass is sufficiently cooled, a gigantic crane picks it from the floor and swings it into a lathe of im-

mense proportions; the belt is shifted upon the wheel, the roller begins to revolve, a cutting instrument of the hardest steel is placed in the proper position, and the metal gives off its roughness in shavings such as might come from a piece of the softest wood in a turner's lathe. The next thing to attract the attention of a visitor is the boring machine, capable of scooping out a lump of metal sixteen tons in weight; this apparatus is also used for boring the cylinders of steam engines. The large lathes in operation here are either of English or Scotch manufacture; an idea of their capacity may be formed when it is stated that one of them is no less than thirty feet long, and the weight is so great that it has to be supported on a heavy cast iron bed. There are also smaller lathes for finishing shafts, &c.; there are three large and as many small planing machines; then there are shaping machines, used for the more delicate kinds of work, such as planing round external and internal curves. To describe the various machines in use in this shop—to endeavor to explain their peculiar functions and the way in which they work, would be next to impossible. There is one machine, however, which deserves a word or two; this is what is styled a "boring bar," used for boring cylinders of some sixty or seventy inches diameter, and twelve feet stroke; the bar itself is some twenty feet in length, and as an illustration of mechanical power is worthy of more details than can at present be afforded concerning it. On passing out of the machine shop the forge is entered. Here there are five fires in full play, the draft for which is supplied by a machine at some distance. The most interesting object in this part of the foundry is the steam-hammer, weighing twelve tons. This hammer is not of the "Nasmyth," but is of the "Condie" pattern—that is to say, the steam gives motion to the cylinder, instead of the piston; the result of this arrangement is, that, in its descent, the hammer has the weight of the cylinder added to its own, as both rise and fall together. This hammer is certainly an extraordinary mechanical power; in fact it is a steam engine and hammer combined, containing

within itself the agency that gives it motion. It is very easily worked, and can be regulated to any degree of force; for instance, the mechanism is so well under control, and everything is so nicely adjusted, that one moment it can smash a ten inch bar of iron, and the next can crack an egg shell without shattering it. This hammer, it may be observed, is the only one of the kind in the city. In the forge there is also a machine styled the "punch and shears," weighing between five and six tons, and able to cut a sheet of iron an inch in thickness. The next department is the boiler shop, which contains a number of machines of immense power. Among others may be enumerated a table punch, a self-acting machine, weighing six tons, and capable of drilling three holes at a time in the heaviest boiler plate; then there is a pair of shears, of five tons weight, which can cut, as if the substance were cheese, into the middle of an eight foot boiler plate, three-fourths of an inch in thickness. The pattern shop belonging to the foundry contains a vast amount of patterns, of every description of iron work, and here five men are kept constantly employed. Mr. Gilbert has peculiar facilities for engine building; the engines in some of the best steamers on the St. Lawrence and the Ottawa are of his manufacture. His engines are to be found in operation in every part of Canada; and since beginning business he has turned out no fewer than ninety of them. He is the only person in the Province who makes what is known as the Corliss engine, in which, by a peculiar arrangement of valve gear, the admission of steam is regulated by the governor balls. Mr. Gilbert has been fourteen years in the business, and knows it thoroughly; he turns his experience to good account, as may be seen from the fact of his productions being so highly estimated by practical men. It should here be added that he makes a description of engine highly prized by some—namely, a high pressure condensing screw engine—which, by peculiar mechanism, can be used either as a high pressure or condensing engine. The buildings occupied by Mr Gilbert are 240

feet long by 50 wide; they contain an engine of 30 horse power, and, in a word, every other requisite for the successful prosecution of his business.

J. & T. BELL, BOOT- AND SHOE-MAKERS.

The premises of Messrs. Bell, 165 Cathedral Block, are of cut stone, and four stories in height; the building is 45 feet in width, by 100 feet in length. The sales-room is very tastefully laid out, the counters and other wood work being grained in imitation of oak. The walls, on either side of the store, and running its entire length, contain a great number of cases, each having a different variety of boots and shoes. On the right hand side are the shelves holding ladies' and misses' work; on the left are stored away the boots and shoes for youths and gentlemen. These shelves, or rather drawers, ranged one above the other in the manner of shelves, are appropriated exclusively to fashionable boots and shoes of every description, and of all prices. The shop is furnished with a number of handsome settees, for the accommodation of customers. In the centre of the shop a large stair-case leads to the upper parts of the building; towards the rear is the cashier's office, and further on, the office proper. On the second flat is the wholesale ware-room, a portion of which, immediately above the stair-case, is so arranged as to throw the light directly down on that portion of the first flat furthest removed from the street windows. The effect of this ingenious contrivance is all that could be desired. This wholesale ware-room has a capital display of the best products of the trade. But though Messrs Bell make boots equal to the best imported, they yet secure, in the French market, the finest quality of goods, principally ladies' and children's. They keep here, also, a large stock of snow-shoes, moccasins, and moccasins with rubbers.—One thing is certain, that persons coming here to purchase, may rest assured of finding goods suited to every taste and to all seasons,—an assortment, indeed, not surpassed by any other shoe store in the

city. The third flat is the general manufacturing department, where the various parts of a boot and shoe are prepared, and given out to the work-people, who reach this story by an entrance set apart for themselves. Here also, the work, when finished, is received. There are fourteen or fifteen different machines in operation here, each used in getting the material ready for the workmen. Messrs. Bell have introduced a new and important improvement in the manufacture of boots for both sexes, namely, fastening on the soles with brass nails, which are rivetted, not only on the outside but inside also, rendering the boots perfectly water-proof.—One peculiarity of these rivets is, that they are corrugated, so that if the head on the outside of the boot should wear off, the rivet, nevertheless, retains its hold of the leather. On the fourth flat is the sewing-machine room, where some 36 girls are kept constantly employed. Messrs. Bell keep at work, outside the building, between 120 and 150 workmen. They use in their manufacture nothing but the very best kind of material, all imported leather; and it is no exaggeration to say, that a visitor going through the whole establishment, and taking up at random a pair of boots or shoes from any of the numerous shelves, would find that that pair was as good, as well finished, and of as excellent material, as could possibly be desired.

McLAREN'S SADDLERY EMPORIUM.

For saddlery of every description the "Emporium" of Mr. John C. McLaren, 33 Great St. James street, in the city, is justly entitled to the rank of first class. The display in this show-room is certainly a large and very handsome one; no article, the product of the trade, seems to be wanting, and everything is excellent of its kind. Those who have to do with horses in any way, will find here, in great abundance, English saddlery, whips of every style, from the best London makers; gentlemen's hunting and racing saddles, and ladies' saddles of the very best description. Here are also, in great va-

riety, bits and bridles of every kind; and spurs, military regulation and hunting. Some of the saddles are of very beautiful workmanship; and there is a number so constructed that they can be transformed, in a few seconds, from a boy's to a girl's saddle. Mr. McLaren possesses an extensive assortment of harness, made of the best English leather, double, single and tandem. This harness is of all sorts in plated, brass and japanned mountings. In addition to the above, Mr. McLaren manufactures the patent machine-stretched leather belting, cemented and copper-riveted. He also makes round and sewed bands of all kinds, and fire-engine hose. There is scarcely anything, to which leather can be applied, that may not be found in this store. There is above all that cheapness, without which any article, no matter how excellent or useful, loses most of its attractiveness.

MONTREAL FOUNDRY AND CITY IRON WORKS.

This extensive establishment, extends from No. 91 to No. 99 William Street, Griffintown. After passing through the office, the visitor is first conducted to the pattern shop, where a number of men are constantly engaged in preparing the originals for castings of every description, plain as well as ornamental. The public are pretty familiar with some of the ornamental iron work produced in this foundry, such, for instance, as the gates and railings enclosing the residences of the Hon. Louis Renaud, Harrison Stevens, Esq., Hugh Allen, Esq., the railings of the French Cathedral, those that surround St. Andrew's Church, Beaver Hall Hill, and others. The gates for the Mount Royal Cemetery, designed by Mr. Hopkins, architect, are making at this establishment. Messrs. W. Rodden & Co. are also making a rare but attractive specimen of iron work—a "ball-chain," with massive posts—intended to encircle the Molson vault, in the same burying ground, and designed by Mr. Browne, architect. Distinct from the pattern shop is the stove wareroom, a building three stories in height.

the first of which contains a vast collection of stoves of all sizes and patterns, while the other two stories are filled with patterns of every article made of cast iron. Messrs. W. Rodden & Co. have attained a wide celebrity for the manufacture of stoves of all descriptions, both heating and cooking, and are continually introducing new and improved styles, original as well as copies of the best American patents. It may be interesting to note, that Mr. W. Rodden commenced in August, 1843, by the purchase of the business of Messrs. Hedge & Bonner, and in January, 1859, admitted his present partner, Mr. W. Olendinneng. The building just mentioned contains the pattern of every stove made by Mr. Rodden for the past twenty years; so that persons who purchase stoves from this establishment, can at any time have them, if wanting repair, re-adjusted after the design of the original. The next place of interest is the finishing shop, where many men are constantly engaged finishing the articles that have been manufactured in the various departments of the establishment. The second story of the shop is a store room for iron bedsteads, a household article in great request, 500 specimens of which have been already sold this year. Adjoining this room is the paint shop, where iron furniture of all kinds is painted, varnished and bronzed, in final preparation for presentation to the public. Above this shop is the store for tin ware. The moulding floor is one of the most interesting portions of the premises; it is 60 by 120 feet, and fitted up to accommodate a large and increasing business, added to which is a commodious new core-room and core-oven, where the cores are made and prepared for the construction of hollow castings. Here we may see iron castings of all descriptions in course of moulding (some of which appear extremely intricate specimens of workmanship), for locomotives, cars, buildings, railings, house furniture and stoves, in great variety. Messrs. W. Rodden & Co. are erecting additions to their establishment, and are putting up a second cupola furnace, which will be capable of melting fifteen tons of iron in three hours.

Another apartment is furnished as a stove mounting shop, where stoves of all designs are completed and made ready for domestic use. An ingenious machine for cleaning small castings may be witnessed in operation. The machine is a large cylinder, into which castings are put, when, the machine revolving, the castings are cleaned and polished by friction. Messrs. Rodden & Co., besides household utensils and ornamental articles, manufacture ploughs, kiln plates, and almost every thing in the metallic line. Upwards of 1000 stoves from this foundry were sold last year. The whole of their manufacturing premises occupy an area of 200 feet square, the machinery being driven by a steam engine. The wares made on these premises are exposed for sale in the large and commodious store occupied by them in Great St. James Street, No. 62. The premises are extensive, well laid out, centrally located, and admirably adapted for the display and storage of the various products of their manufacturing establishment. It has a frontage of 25 feet, on Great St. James Street by a depth of 80 feet, and forms part of a large building erected by them on ground they have leased for a term of years. On the right hand side, entering from the street, and so constructed as not to encroach on the show room, is the office. The show room is replete with a very fine and varied display of stoves, railings, ornamental castings of every description, iron bedsteads, fire grates, hat stands, garden seats, and articles in metal of almost every pattern and use. The assortment of stoves is very varied and complete, including the "Queen's Choice," a cooking stove manufactured only by Messrs. W. Rodden & Co., which possesses many advantages and is daily becoming more sought after; also single and double stoves, known as the "Prince's," &c. These stoves are all designed with special reference to the requirements of our Canadian climate, and being of home manufacture, can be furnished at much lower prices than if imported from the States. There is also on exhibition in this store a great variety of kitchen utensils, iron furniture, garden and other railings, &c., perfect, both in de-

sign and finish. In rear of the show room is a large room used for general storage. On the second story of the building the tin ware sold by Messrs. W. Rodden & Co. with their stoves, is manufactured by their employés. The entire premises well merit a visit from those interested in this department of Canadian industry. The productions of this establishment have invariably taken the first prize for iron founders' work; also European as well as Canadian medals and diplomas at the various Exhibitions. Some idea of the extent of the Montreal Foundry and City Iron Works may be formed from the fact, that over eighty hands are steadily employed all the year round, and very frequently as many as a hundred.

PIANO MANUFACTORY AND SHOW ROOMS OF W. VOGT & CO.

This establishment, one of the most extensive of its kind in Canada, is a large cut stone building, three stories high, fronting on Craig Street, No. 138, and running back to Fortification Lane. Entering the show room from Craig Street, a long double row of superb instruments, of various styles, present themselves to view, while Mr. Vogt, jr., is there ready to exhibit their powers and quality of tone. Although Messrs. Vogt & Co. make no pretensions to superiority above all other *pianoforte manufacturers*, they nevertheless manifest significant confidence in the comparison of their instruments with those of their competitors in Canada; and are prepared to convince the *connoisseur* that they possess the talent and means for producing instruments which are quite equal to the best that can be made. Ascending to the second story of the building, the visitor finds himself in the department where the cases and sounding boards of pianos are constructed, and where the cast iron frames are prepared and adjusted; here a large number of first class workmen are employed. The finishing, key-making and stringing department is in the third story, where several ingenious ma-

chines are to be seen in operation, the most noticeable of which is an apparatus for spinning strings; this machine covers the iron wire with fine silver wire, in a most rapid and efficient manner. One portion of this flat is also used for supplying the pianos with the necessary complex action, after which they are transferred to the varnishing and polishing department, where they are finished and made ready for the show room below. The polishing and varnishing of the instruments involve a great deal of labor, and considerable difficulty, owing to the frequent repetition of those operations—no less than twelve coats of varnish being necessary to perfect them. These operations, of course, consume a vast amount of time, a period ranging from two and a half to three months being requisite for the perfection of a pianoforte. The rear portion of this flat is used as a drying room, where the wood is thoroughly seasoned before it is sent to the workshop. When all these things are considered, it is matter of surprise that a perfected piano can be procured with such comparative cheapness. Messrs. Vogt & Co. carried on the manufacture of pianos for many years in Philadelphia, U. S., and came to this city about two years ago, since which time their instruments have found their way to most parts of the Province. During the many years they carried on business in Philadelphia, they enjoyed an enviable popularity, their pianos being in demand all over the United States, North and South, as well as in Mexico and South America, from all of which places they hold certificates showing how highly their instruments are prized for their excellence of finish and brilliancy of tone. The Vogts, like Steinway, Schomacher, Steck, and most of the celebrated makers on this continent, are from Germany, the land where the twanging harpsichord has been developed to the beautiful and powerful instrument now called a pianoforte. No manufacturer has done more to perfect, step by step, the piano, than the senior Vogt, in connection with Stein, of Vienna. They manufactured in that city the first "Grand" piano; and they also originated what is known as the Vienna action. In 1836, Mr. W.

Vogt and his sons emigrated to the United States, and established a piano manufactory in Philadelphia. In that city they originated and patented the important improvement of passing the strings through an ivory bridge, by which greater brilliancy and clearness of tone is obtained. At present there are five brothers engaged in the manufactory, each of whom superintends a different branch. Having been reared in the business from boyhood, it is not surprising that, with their personal supervision, such perfect pianos are made. As home manufacturers their pianos should obtain a very large sale, and we have no doubt they will continue to receive the liberal and well merited encouragement they have met with since they commenced business in Montreal.

THE OTTAWA HOTEL.

The merits of this favorite establishment (one of the oldest in the city) are so widely and deservedly appreciated by the travelling community of Canada and the United States, that commendation here may be considered superfluous. To tourists and strangers beyond the limits of Canada or the neighboring Union however, a brief description of this first class establishment may not prove uninteresting. The Ottawa Hotel is a handsome cut stone building, fronting on Great St. James Street, with a rear entrance from Notre Dame Street; it is four stories in height, with stone pillars along the portico or front entrance, and affords accommodation for about two hundred and fifty persons, comfortably. Its central position possesses great advantages, being within a few minutes walk of many of the principal public buildings and places of interest in the city, besides being adjacent to the Post Office and many of the leading banking institutions. The general entrance is on the right of the portico, passing through which, the visitor finds himself in the public reception room, at one end of which is the office, superintended by an obliging clerk or book-keeper. The guests here enter their names in the "arrival book," and receive the immediate atten-

tion of one of the numerous porters in waiting to convey luggage, &c., to the rooms selected. To the right of this entrance is the reading room, having a separate entrance as well from Great St. James Street. This room is very comfortably fitted up with sofas, lounges, easy chairs, &c., and is well supplied with daily journals from all parts of Canada and the United States, besides several of the leading publications from Europe, maps, &c. At one end of this apartment is a convenient writing table, supplied with letter and note papers, pens, ink, envelopes, &c., for the special accommodation of guests of the house. The private entrance is on the left of the portico, by which the visitor proceeds through the hall and up a capacious stair-case to the drawing room—an apartment about fifty feet in length by thirty in breadth, and furnished in Messrs. Hilton's best style, saying which, precludes the necessity of any further description on this score. The walls are tastefully decorated with paintings of a high order; magnificent gasaliers suspend from the ceiling; book cases, containing standard works and the latest magazines, occupy appropriate places; while a superior pianoforte adorns the centre—in a word, the drawing room is complete, and furnished in admirable style. Leaving the drawing room, the course of the visitor is directed still upwards by several flights of stairs, each terminating on a corridor, at the extreme end of the first of which are the bath rooms, supplied with hot and cold water, &c. From these corridors the bed rooms extend in all directions, to the number of about one hundred and thirty, all of which are large, well lighted and ventilated, furnished also with a view to comfort, by Messrs. Hilton. Each suite of rooms is placed in charge of a competent house-maid, so that nothing is wanting that could by any possibility contribute to the comfort and happiness of the guests. Arriving at the attic, a small stair-way leads out upon the roof of the building, from which a magnificent view of the city and the surrounding country is obtained. Descending again to the hall, and turning to the left, the public dining room is entered. This room is capable of seating

comfortably one hundred and fifty persons; families or private parties, however, who desire it, are accommodated in a private dining room off the drawing room. The carving room adjoins the public dining room, and is reached from the kitchen in rear, being completely out of view of guests at table. The joints and vegetables are here kept hot by steam, so that parties who happen to come in after the appointed meal hour, are certain of getting as warm and comfortable a dinner, as those who were more prompt in their attendance to that interesting and pleasing duty. This department is under the management of a head waiter and an effective staff, who seem to vie with each other in their attentions to the guests. To the left of the office and traversing the hall, is the saloon, having a separate entrance also from Great St. James Street. Passing again to the right from the general reception room, and ascending a short flight of stairs, a corridor is entered, from the right of which, about midway, is the barber's shop and wash-room. Continuing through this corridor, leads to the ingeniously concealed closets. Returning again to the hall, a spring door opens to the basement of the establishment, where are situated the store room, the larder, the kitchen, the scullery, the servants' dining room, the laundry, &c. Lastly the cellar is reached, which extends under the entire building, and is found to contain a great variety of wines and liquors of the best qualities. The Ottawa Hotel has been under the management of its present popular proprietor, Mr. Samuel Browning, for nearly twelve years, and has lost none of the favorable old prestige it obtained in the days of Mr. Hall—Browning's predecessor—but possesses all the advantages their long experience could bestow. For the accommodation of his guests, the proprietor has prepared a "City Guide," or synopsis of the places of interest in and around the city, which may be obtained GRATIS on application at the office. One particular arrangement, greatly to the benefit of American travellers, is, that United States bank notes are received AT PAR in payment for board, from all parties from the United States. The charges at the "Ottawa"

are, as they ever have been, very reasonable. In short this establishment presents to the traveller everything to be desired, and is in every respect worthy the attention of travellers, strangers or transient visitors to the city.

MR. ENGLISH'S GROCERY.

This store, 266 Notre Dame Street, is a very attractive place of business. The tea and coffee trade have, for a long period, been carried on in these premises. So far back as the year 1835, Mr. Benson began business in this place as a tea and coffee merchant, but ultimately the grocery trade became merged with the above mentioned two particular branches. Mr. Benson's coffee was celebrated over the city and the Province as well; and it has been the leading idea with Mr. English to make the tea and coffee departments the distinctive characteristics of the house. The shop, inside, is fitted up with much taste, and everything that can attract the eye or appeal to the palate is admirably arranged. Altogether, the interior is a model of neatness and display. The back part of the premises contains the store rooms, &c. Here there is also situated the coffee roastery. The machinery is ingeniously made, and admirably calculated for the purposes for which it was intended. In the first place there is a capacious iron cylinder, made to revolve over a furnace; and the former is something like three and a half feet long. Inside this cylinder is a worm, which when the cylinder is set in motion, has the effect of equalizing the heat applied to the coffee—in other words, it so disposes the coffee that every part receives the heat at the same period of time. A sack of coffee is put in at a time; the machinery is set in motion; the cylinder begins to revolve, and at the end of half-an-hour the operation of roasting is performed. The cylinder is so constructed as to preserve all the aroma or vital principle of the coffee. The machinery which turns the coffee roaster, also puts in motion a mill for the grinding of spices. These mills are of steel, not of stone, the

latter material having the effect of extracting the oil or essence of the spices. This grocery does a very large business in coffee, which, as is well known, is as fine an article of the kind as can be procured. In tea, also, an extensive trade is carried on. It is one of the very few places which roasts as well as grinds coffee; and this part of the business is carried on under the especial supervision of Mr. English himself. The place is an excellent grocery throughout; and as a concern where machinery is brought in to add to the requirements of the business, will be found, no doubt, to possess claims to this brief description.

W. McBAIN & CO.'S WHOLESALE BOOT AND SHOE WAREHOUSE.

This establishment is situated at the corner of St. Peter and St. Paul Streets; and is a large three story stone building, having a frontage of thirty-five feet, and a depth of sixty feet. The main entrance is from St. Paul Street; the side entrance to the work rooms is from St. Peter Street. The lower story is devoted to the keeping of the manufactured stock, and is also used as a sales room, the counting room and office being on the right of the main entrance. On this story are to be seen beautiful and highly finished specimens of boot and shoe making. Messrs. W. McBain & Co. confine themselves to no *specialty* in their line of business, but manufacture the very finest kinds of boots and shoes for men, women, misses or children, as well as the heaviest descriptions of work in demand. Among the extensive and varied stock constantly to be found in their show rooms, are to be seen ladies' boots made of French kid skin, which are as pliable as a kid glove; no matter how tight the boot may be to the foot, it is as soft, delicate and pleasant as it is possible for any material to be. There are also to be found here, boots made of French goat skin, flexible, yielding and accommodating to every motion of the foot with the greatest elasticity. The exterior of this leather is handsome in the extreme. Fine as is the texture of the

two specimens of the leather just mentioned, the workmanship is correspondingly attractive—in a word it could not be surpassed. The second story of the building is occupied as a cutting and finishing room. Here is almost every species of modern machinery that can possibly be put into requisition for the manufacture of boots and shoes; and in this room also the leather is cut into the necessary proportions and given out to be made up. The third story is devoted to the purposes of sewing fine work; and quite a number of machines, operated by young women, keep up their hum of industry the whole day long. In a room, to the rear of this story, the fine leather, already alluded to, is deposited. As Messrs. McBain & Co. import this valuable material direct from France, their customers are certain of getting the pure article, while its wear and tear eventually confirm this assurance. This firm affords employment to over two hundred and fifty persons, about one hundred of whom are accommodated on the premises. They turn out about three thousand pairs of boots and shoes per week, and find customers for them throughout the Province, almost as fast as they are made.

PLAIN AND FANCY STATIONERY, PICTURES, FRAMES, MOULDINGS, &c.

The shop of Mr. Horne, 52 and 54 St. Francois Xavier Street, is one which persons passing along that thoroughfare pause to glance at—in fact a more attractive window it would be hard to point out. On entering the shop, a person at first sight would not suppose there was that variety of first-class articles which a few minutes inspection discloses. Mr. Horne, although a large dealer in plain and fancy stationery, makes picture framing and pictures the predominating feature of his business. All styles of mouldings are to be found here, of the handsomest patterns, and at the most moderate rates. The walls of the shop are decorated always with chromolithographs of the finest execution, and representing the fairest subjects that can be transferred to paper. In

connection with this subject it may be appropriate to state that Mr. Horne is agent for the Art Union of Glasgow. The store contains an assorted stock of commercial stationery equal to any in the Province. Competent judges have given it as their opinion, that for neatness, attractiveness and variety, this store will compare favorably with any in the city. There are to be found here account books of all sizes, pens of every kind, ink stands, paper, office cutlery, in a word, everything comprised under the comprehensive term of commercial stationery. It should also be stated that Mr. Horne does a large business in artists' materials, and keeps always on hand a first-rate collection of colours, drawing paper, &c. At the back of the store there is a compartment specially appropriated to the storing of inks, of which Mr. Horne has a stock excellent in quality. The second story of the building is used for the storage of mouldings. As has been said already, Mr. Horne has made this a specialty; and as far as regards the framing of pictures with the handsomest material, he is prepared to execute orders to any extent. Mr. Horne makes it a point to possess himself of every article novel and useful in connection with his business. An instance will suffice. Some time ago there was introduced in Paris a reporter's portfolio, convenient in size, attractive in exterior, and by an ingenious arrangement made to contain paper, blotting paper, ink-stand, pens and pencil, together with a stiffened page on which to place the paper if writing on the knee; also an inner portfolio for holding a quantity of paper. The invention was no sooner known than Mr. Horne imported several of the portfolios, which are not only useful to reporters, but to tourists and travellers. It only remains to say in conclusion, that Mr. Horne's taste and enterprise are deserving of public support.

FELT AND GRAVEL ROOFING.

This style of roofing was first introduced into this city about ten years ago, by Messrs. C. M. Warren & Co., of

Boston, Mass., who were here represented by Mr. M. M. Steele, and subsequently by Mr. T. L. Steele. In 1860 Messrs. C. M. Warren & Co. retiring, the business passed into the hands of the present firm, Messrs. T. L. Steele & Co., who have done and still continue to do a large business in this line, both in the city and throughout the Province generally. This style of roofing possesses many advantages over the metal and slate roofs. The cost per square is much less, and as it does not require an elevation of over one inch to the foot, a great saving is effected both in the material required for the framework and gables, and in the surface to be covered. Its slight elevation also lends additional beauty to our stores and terraces, and obviates all danger from falling snow, through which so many accidents annually occur. The composition is perfectly fire-proof, and both air and water tight: so cohesive and incombustible is its nature that it will frequently remain uninjured when all else about the building has been consumed. At the fire which occurred in Messrs. Rogers & King's foundry a year or two back, the building was completely gutted, yet the roof, which was a flat one, covered by Messrs. Steele & Co., remained uninjured. So also at the fire which during last winter destroyed the cabinet warehouse of Mr. Geo. Armstrong, on Craig Street, the roof was found to be perfectly sound, although the timbers which supported it were so burned that they would not support the weight of a man. Many similar instances have occurred, but the above will suffice. The flat roof is also a great protection against loss of life in case of sudden fires, affording the tenants in the upper parts of the burning building an easy and secure means of escape to those adjoining, or a safe refuge from the flames till those below can adopt means to relieve them. A marked instance of this occurred at the fire in the St. Lawrence Hall, last winter, where a number of servants sleeping in an upper portion of the building were roused from their slumbers to find the flames bursting through the flooring of their apartments, and all means of escape by the staircase cut off. Thus situated, they would in all probability have perished in

the flames, had they not succeeded in making their escape by the roof—which was fortunately a flat one—on an adjoining portion of the building. Since the establishment of the business, Messrs. Steele & Co. have covered many thousand roofs, principally in this city, and every opportunity has been afforded for thoroughly testing their durability and efficiency—they have proved perfectly successful. During this period four or five different kinds of composition roof have been introduced, but these have for the most part proved worthless. This firm also put on English felt roofs, but they do not recommend them, experience proving the English felt to be unequal to the article manufactured in Canada. The exhibition building in this city, erected in 1860 by the Board of Arts and Manufactures, was covered with English felt by a firm in this city, but it has been found impossible to keep it water tight, and Messrs. S. & Co. have received and just completed a contract for recovering it with their felt and gravel composition roofing. It is now, we believe, perfectly water tight, a fact which will, doubtless, afford great satisfaction to the members of the Field Battery, who have used it as a drill room and armoury for the past two years. The light color of the gravel, (almost white) is in perfect harmony with the pressed brick facings of the building, and makes a decided improvement in its general appearance. The covering of the large dome, running the entire length of the building, owing to its enormous surface and rounded sides, is very difficult of accomplishment, and it has been found impossible to lay the gravel on the steeper portion of its sides, which are therefore covered with composition only. The glossy black surface of this portion, in immediate contrast to the lighter roof above, produces a peculiar and not unpleasing effect. Enough has been said to show that this roofing is all the manufacturers claim for it; and it is, so far, the only composition roof introduced that has successfully stood the test of our climate. The factory of Messrs. Steele & Co. is situated in Ann Street, Griffintown, where they have also ample yard accommodation for the enormous piles of gravel they keep con-

stantly on hand, the greater portion of which is brought from Lake Champlain. Their office is No. 3 Place d'Armes Hill, opposite the City Bank

BENALLACK'S FAMILY GROCERY.

Bonaventure Hall is one of the largest public buildings in this city, presents a very imposing exterior, and as an assembling place for large meetings, is well known to every one in the community. The lower part of this hall is occupied by Mr. H. J. Benallack, family grocer, who succeeds Mr. R. Thomas in this business. The reputation which this establishment acquired when under the direction of its former proprietor, it still retains. The exterior of the store is very attractive, not only from its size, but from the excellent and artistic arrangement of the articles therein displayed. With regard to the interior, a better furnished or more neatly fitted up establishment of the kind it would be difficult to find. There is nothing wanting which could add to the attractiveness of the inside of the premises. The counters are panelled and grained in imitation of oak, the tops being covered with marble. Behind these are the shelves, constructed at considerable expense and in the best possible style. These shelves are semi-circular, and run round the interior of the store. They are divided into compartments, arched, and the space between the top of the arch and the cornice is beautifully decorated and painted in gold and other colors. These compartments are divided, the one from the other, by marble pillars, with Corinthian capitals. The design of these shelves is composite, between the Grecian and the Moorish, is productive of a handsome combination, and at the same time, a beautiful effect. These shelves are so constructed that they are capable of being taken into pieces, they are also open from behind, so that at night, when the rear of the premises is lighted up, the light shining through the apertures, glancing off the numberless bottles and falling on the rich mouldings and beautiful gilding, produces an effect, not once exquisite and highly attractive. The drawers,

below these shelves, are very finely finished and tastefully painted. In the immediate vicinity are a host of canisters, which correspond in color with the compartments in which they are placed. These canisters are made with a view to display as well as to utility; in the latter respect they are constructed in such a manner that the tea, &c., can be put in at the top and taken out from the side. In the centre of the shop is a large and well-made show table; it fronts the door, and is so arranged that at night the lights from the rear of the premises shine through, and the reflection is as attractive as it is brilliant. The rear of the premises is occupied as store-rooms, &c., and here the sugar and coffee mills keep up an incessant clamour. It should be mentioned here that Mr. Benallack has in operation a cheese-cutting machine, the only one of the kind in the city. The weight of the cheese first being ascertained, this machine cuts off any quantity with the greatest accuracy; the manner in which this function is performed, being as ingenious as it is unerring. The cellar of the building is one of the most perfect of its kind. It is lined with brick, and in every way adapted for the purposes in view. No better place could be found for storing the articles which require to be kept in a cool and fresh condition. There is a large stock stored here, and among other things a great variety of wines and liquors, imported from Europe and of the best quality. It only remains to say that as far as the best of everything is concerned, Mr. Benallack always has on hand every requisite that goes to make up the reputation of a first class grocery. He is agent for "Sharpe's" celebrated finnan haddies, a delicacy that is now indispensable for the breakfast and tea table, and keeps constantly on hand a variety of delicacies which makes his store in every respect the most complete.

J. STARKE & CO.'S PRINTING OFFICE.

One of the oldest and most popular printing establishments in Montreal is that of Messrs. J. Starke & Co., book and job printers, 33 St. Francois Xavier Street.

For a period of thirty-five years, the name of this firm has been before the public, whose liberal patronage is the best possible testimony to the merits of the work turned out of their establishment. The business was commenced in the year 1828, under the name of J. & T. A. Starke, in Notre Dame Street, opposite the Nunnery buildings, and afterwards was removed a few doors east of the Place d'Armes, where the business was carried on in connection with those of book-selling and book-binding, where it remained till the year 1836. The latter branches were then discontinued, and attention given exclusively to the printing business; they then removed to St. Therese Street, where it was successfully conducted for sixteen years, and again removed to Notre Dame Street, corner of St. Francois Xavier Street, and there continued for the space of ten years. Those premises they only lately vacated for the larger and more commodious building they occupy at present. The printing office comprises the first and third flats, the former about 35 feet broad by 60 in depth, and the latter about 45 feet broad by 65 feet. The business office is entered from the street, the walls of which are decorated with specimens of plain and ornamental printing, cards, &c. Passing through the office, we enter the press room, in which three printing machines (Hoe's cylinder, Adams' and Gordon's presses), and four hand presses are at work. The former are driven by a most convenient steam engine, of about three-and-a-half horse power, which being on the portable principle, only occupies a space of thirty inches square. Besides the above, the press room exhibits a hydraulic press of great power, an efficient machine for pressing and smoothing bundles of printed sheets and forms; also a strong screw press for the same purpose. A platform-enclosed hoist, by means of which the "forms" are made to ascend or descend between this department and the composing room on the third flat, operates with great facility and safety. A speaking tube also connects the business office with the compositors' department, adjoined to two sliding boxes for the conveyance of "copy" and "proofs" between the two flats. There is also a paper

cutting machine, and all the instruments and appliances required in a first class letter-press printing establishment. The third flat, to which we ascend by means of a covered stairway, is the composing room, and a more clean and well arranged place of the kind we have seldom seen. No unsightly heaps of *pi*, quoins, or bundles of side sticks are to be seen strewn about, but everything is in good order and in the right place. Messrs. J. Starke & Co. have a large and valuable stock of plain and ornamental type and borders, and are in a position to execute work of every description in the best style of the art, economically and with despatch. A prize for their admirable workmanship was awarded them at the Great Exhibition of 1851. They also obtained prizes for specimens of printing at several of our Provincial Exhibitions.

McGIBBON'S GROCERY.

Mr. McGibbon commenced business on his own account in 1856, in the limited premises on Notre Dame Street known as "Hall's store," but in two years time his business increased to such an extent as to require increased accommodation. Accordingly, in 1858, Mr. McGibbon removed his establishment to the premises he now occupies at the corner of Notre Dame and St. Gabriel Streets, fronting 48 feet on the former, and 75 on the latter street. This store is as well known now as it was in times past, when occupied partly by Messrs. Savage & Lyman as a jewellery store, and partly by Messrs. Solomon & Co. as a fur emporium. The whole of these premises are now converted into one establishment—McGibbon's Grocery—and to meet the requirements of a still increasing business, Mr. McGibbon contemplates a further enlargement next Spring, by an extension in rear. There are two main entrances from Notre Dame Street, on either side of which is a large window, devoted to the display of articles in the trade, while between those entrances is a smaller window, in which is displayed a neatly made steam engine of about one-horse power, and which is kept a most constantly in motion, turning a

large coffee mill. This mill is capable of grinding from 60 to 75 lbs. of coffee per hour if required; thus enabling Mr. McGibbon constantly to meet the demands of his customers for fresh-ground supplies of that staple article. A fourth window displays goods on St. Gabriel Street. These windows are all glazed with plate-glass—the first of its kind used, for such purposes in Montreal. They lend to the store from outside, a good business appearance. Any one passing this establishment cannot fail to be attracted by the bustle of vans going and coming, and customers pouring out and in; an outside view alone will be enough to convey to the stranger or casual observer, an idea of the extent of business transacted by Mr. McGibbon. On entering, the visitor will notice all the appearances of a first-class retail grocery, where a number of men are busy behind the counters attending to the demands of customers; or hastily engaged in preparing parcels to be taken away in the vans. The store has the advantage of being floored in terraces of three steps each, which adds considerably to the effect produced by the interior. The rear terrace is principally filled with chests of tea and other articles required for the more immediate use of a retail shop. The office and counting room are situated in the rear part of the premises. Mr. McGibbon is largely engaged in the finnanhaddie business, being sole agent for Mr. McEwan, of Portland. Not only on account of the excellent quality of these palatable and delicious fish, but also owing to Mr. McGibbon's enterprise and perseverance, the finnanhaddie has become a necessity for the breakfast and tea table. He has also recently become concerned in the smoked salmon trade, having placed himself in business relations with Mr. McEwan, of Portland, with a view to the successful prosecution of that branch of trade at the Saguenay River. Salmon thus prepared at the place indicated, will be kept constantly on hand, in prime order, by Mr. McGibbon. His assortment of smoked beef, bacon, &c., will always be found most inviting, while his importations of game of all kinds, from England as well as from the Western States, are always

in season. With regard to the store:—proceeding up stairs will be found a reserve store room for the lighter articles of the grocery business. Descending to the cellar it will be found divided into two apartments. In the front part, wines and liquors are classified and stored away; in the rear is an extensive stock of miscellaneous goods, and a department for washing bottles, &c. The cellar, as a whole, is so arranged as to afford excellent means of disposing of the classified stock. From St. Gabriel Street, the yard is entered. This arrangement is found to be very convenient, permitting as it does the ready unloading and storing of the heavier articles, such as barrels, boxes, &c. Mr. McGibbon employs a large number of clerks and attendants, most of whom board on the premises. Two vans and four horses are kept constantly employed supplying out-door demands. His goods are in demand not only throughout this city, but in distant parts of the Province. He has even received orders from Baltimore and other cities in the United States, for some particular brands of wines, liquors, &c. He makes it a point to secure the latest introduced article to our market, and in this way has aided, with others, to effect a revolution in the grocery business within the past few years.

UNDERTAKERS.

From the earliest ages mankind has reverently expended the greatest care in suitably preparing, or affectionately decorating, the receptacles of the dead. The sentiment is as natural as the purpose is pious. The poorest vie with the richest in the attention devoted to the departed; and on the tomb as upon the coffin nothing is considered too valuable to lavish. But it is of coffins, in particular, that the present notice would more especially treat. Of late years, as is generally known, there has been an attempt to substitute for the coffin of wood, one made of metal. The first effort in this direction was made in the United States; thence the example found its way to Canada. Messrs. Seale & Tees, 60 Great St. James

Street, Montreal, are now engaged in the production of "Fisk's Patent Burial Casket," a coffin immeasurably superior to any commonly in requisition. These gentlemen are the only firm in Canada who prepare these burial caskets; and they have made several improvements on the one made in the United States. These improvements may be briefly described by stating that they have the effect of making the coffin perfectly air-tight; and also more easily carried than the other. The "burial casket" is provided at the head with a glass face, and this in turn is fitted with a metallic cap. The coffin is first cast in a mould in the foundry, then it is brought to the shop, where, after undergoing three or four processes, it is at length polished of a bright rosewood color, so naturally, that it is impossible to distinguish it from wood. Enough has probably been said about these burial caskets; and the reader will intuitively perceive sufficient to render it obvious that they are in every respect superior to wooden coffins. Messrs. Seale & Tees keep on hand every article in use by undertakers. It may not be objected, however, to add here, that Messrs. Seale & Tees also manufacture and keep constantly on hand an assortment of commodious office desks, chairs and stools, of very superior workmanship; and that they likewise undertake the furnishing and fitting up of commercial or business offices of every class. They give constant employment to a large number of men in the prosecution of this branch of business.

MARTIN'S PHOTOGRAPHIC ESTABLISHMENT.

Persevering industry in any art or calling, rarely ever fails to be rewarded in due season, with signal success. This fact is fully illustrated in the origin, progress and present magnitude of Mr. Martin's photographic establishment, corner of Craig and St. Peter Streets, Montreal. It is now eleven years since Mr. Martin made his appearance in our city with his "Daguerrean Saloon,"—a huge omnibus, or sort of "house on wheels," as it was described at the time. In this

nondescript domicile he commenced business. He relates an amusing incident of being startled one fine day, in the midst of a crowd of customers, by the sudden entry of the Chief of Police, his highness being obliged to stoop for want of head room. The tall chieftain roared out a peremptory order to extinguish the fire. "What! put out my pipe?" said the daguerreotypist, "why his honor the Mayor gave me permission to establish myself here." "His Honor be —" said the Chief, "why did you not come to me? I am the only authority; down with your smoke-pipe, or I will have you fined." But the difficulty, says our informant, all ended in smoke, the ingenuity of the Daguerreotypist being equal to the emergency. He erected a chimney in the yard immediately outside his "saloon," thrust his stove-pipe into it, and thus complied with the law bearing on the case. From this novel commencement the subject of our notice moved steadily forward, and in a few years found it necessary to provide larger scope for his energies. Unaided, and at great expense, he fitted up the interior of the building which he now occupies, dividing it off into several large and comfortable rooms, the whole arrangement affording those who enter for the first time an agreeable surprise. His skylight, with which he has recently connected a side window, faces the north, and is in every respect a magnificent delineator of the photographic image. The business is conducted on a large scale and with admirable system. Mr. Martin, with two assistants, takes the negatives. These are passed to the printing room, where an experienced workman places them beneath the "sensitized" paper, and exposing them to the solar light, watches the process committed to his care. The toning, washing and mounting of the prints furnish labor for additional hands; and to complete the working force, a clever artist is engaged, whose time is fully occupied in coloring photographs. The larger sizes are colored in oil, the medium and smaller sizes in water colors. Some excellent specimens of this gentleman's ability hang in the show room. The water colored portraits especially, are equal to any that we have seen in the city or elsewhere.

In the upper flat a large room is appropriated to the solar camera. Here large sized portraits, up to the full length of life, are executed. The process is as simple as it is wonderful. A small sized negative is taken and placed in a camera box. This box contains an immense sized plano-convex lens, placed in one end; on the other end is fixed an ordinary sized portrait tube. The negative occupies a space between the large lens and the tube. The box is placed with the end containing the large lens against an open space in the window; outside this opening a mirror is arranged, which is made to revolve by a fixture inside; the rays of the sun falling upon the mirror are reflected on the large lens; passing through this they strike and pass through the negative, then through the portrait tube, and in this manner a magnified image is thrown upon any opposite surface in the room. A sheet of sensitized paper or prepared canvass is fastened to a screen; the image, magnified to any size, in proportion to the distance the screen stands from the camera, falls upon the sensitized surface, the instrument is focussed and the light turned on; in a short time the image is impressed on this surface, and continues to strengthen till it stands forth in all the detail and beautiful proportions of life. There is no lack of apparatus in this establishment; cameras of every size stand in their places; there is one of mammoth size, having double achromatic lenses, which cost, with its accessories, three hundred dollars. One room contains many thousands of negatives, systematically arranged and preserved, so that any number of prints can be taken from them in future. There is a peculiar qualification necessary to master and appropriate the higher developments of photographic art. The process which bears the name of Daguerre, and which is now obsolete, required careful manipulation and a certain degree of taste; but it was comparatively simple. The ambrotype process, or glass positives, which came next in order, afforded still easier facilities for adventurous knights of the camera; and hence the photographic dominion soon became thickly populated with an inferior class of operators. Rapidly, and unexpectedly to many, the paper process

came to light, and claimed precedence over all others. This process is altogether more complicated than either of the former; it is delicate and subtle in its details—more expansive—ensuring the attainment of large images to perfection. For these reasons, a limited number only of those initiated by the previous modes have proved capable of attaining to excellence in this last and highest development. It has been contended by many European critics that photography is not entitled to be ranked with the fine arts. If applied to certain slovenly attempts at photography, the statement is pertinent and just; but to stretch the objection to all photography, without discrimination, is unjust. A photograph that indicates and combines the product of chemical science, mechanical skill and artistic taste, ought to have an honorable place in the department of art. No man can attain to eminence in photography who does not possess the feeling, the spirituality that permeates and glorifies the conceptions of the artist. His taste must be delicate and refined; he must be able to pose his subject to the best advantage, to arrange his lights and shadows, to introduce suitable accessories; add to such qualifications perseverance and industry, and success will be the result sooner or later, as it has been, in a marked manner, in the case of the subject of this notice. It may not be out of place in closing this article to state, that Mr. Martin, like some of the most successful photographers in the United States, is the author of many pieces of poetry, some of which have received flattering notices from the Press—a proof that he possesses one of the most essential qualifications for a true artist.

THE ALBION HOTEL.

In this age of travel the hotel has become an institution everywhere; some are first class, others middling, and some inferior to a village hostelry of half a century ago. The Albion Hotel, 311, 313 and 315 St. Paul Street—Messrs. Decker & Co., proprietors—is a first class establishment, and the traveller will find in it, for the time

being, all the comforts and attentions of a home. This hotel is well and favorably known to the travelling portion of the community, and is largely patronized by the merchants of both sections of the Province whom business attracts to Montreal. The building is four stories in height, and on the front, which faces St. Paul Street, presents a very handsome appearance. The hotel possesses many advantages. It is within easy reach of the Post Office, the Télégraph Office, Banks, and is close to the principal warehouses of the city. Within the last year the business has increased so rapidly, that the proprietors have found it expedient to add further to the accommodations of the building by erecting a second wing to the premises. This wing is about two hundred feet in length; and, in addition, a new dining room has been constructed, which is capable of seating no fewer than two hundred guests. The sleeping arrangements are as perfect as possible; the rooms are airy and commodious, and the beds are all furnished with spring mattresses. It may also be well to add, that the furniture of the house is all new and of the best description. The Albion Hotel has been under the charge of its present manager, Mr. Decker, for over five years; the patronage which the house continues to receive is the best commentary on the manner in which he conducts his business. The hotel, during the past five years, has undergone extensive alterations, and many improvements have been effected; the consequence is that it is now one of the largest establishments of the kind in the city. The attendance at the Albion Hotel is first rate; the board excellent, and the charges only \$1.50 per day. In a word, the house is one where the guest can take up his quarters with the full assurance that he will find everything to suit his taste, and receive the very best of treatment.

TIN, COPPER & SHEET IRON MANUFACTURES.

Mr. Samuel Holmes, 125 St. Paul Street, is extensively engaged in the above branches of business, and the productions of his workshop have found their way over the

Province. Over the door of his premises there is to be seen a piece of mechanism of his own invention, which sufficiently indicates the ingenuity he brings to bear in the details of his business. The object to which allusion is made, is composed of two large gilt plates of metal, constructed of a circular shape, and intended to represent the rising sun. Both of these bodies revolve in opposite directions, and the effect produced is very striking, as the crowds who daily witness it amply testify. But the mystery of this beautiful piece of mechanism, Mr. Holmes retains as the inventor. This, however, is certain, that it is one of the most novel and showy signs ever constructed. Mr. Holmes is well known as a builder of hot-air furnaces, a part of his trade which requires not only skill but scientific knowledge as well. It speaks well for his proficiency in this respect, that he was commissioned to fit up the line of the Grand Trunk from Guelph to Island Pond, and from Montreal to Quebec and Riviere du Loup, with heating apparatus; which, since erected, has worked to complete satisfaction. Mr. Holmes was also employed to supply a hot-air apparatus, furnace, chimney, etc.; for the English Cathedral; and, at the same time, to provide the ventilating machinery. The manner in which the work was performed is too well known to require commendation. He also engages in roof-building, for which, as regards experienced workmen and good material, he enjoys the best facilities. He is a dealer in paints and oils, and it is important to notice that he is one of the few persons in this city who is employed in the manufacture of dry colors. He always keeps on hand a variety of varnishes, and a large supply of glass. There is to be found in his establishment every description of tin, iron and copper ware, in the shape of domestic utensils; and in the construction of these, as well as for carrying out the other departments of his trade, a large number of workmen are always employed. In addition to what has been enumerated above, Mr. Holmes devotes attention to the illumination of public buildings on occasions of general cele-

brations. At the time when H. R. H. the Prince of Wales visited Montreal, our citizens will remember the magnificent display made at night by the City Hall, when it was decked from basement to dome with thousands of vari-colored lights, arranged with the best possible effect. This part of the public illumination was justly praised at the time, and Mr. Holmes came in for his due share of credit. The above fact is noticed in order to show that he can carry out this difficult portion of public decoration with the fullest success, and is prepared, when called upon, to give his services in this respect also, in any part of the Province. It only remains to add, that any order with which he may be favored, will be carried out in such a manner as to give that satisfaction with which all his previous services have been received.

POPHAM & SINCLAIR'S WHOLESALE BOOT AND SHOE ESTABLISHMENT.

These premises, 287 and 289 St. Paul Street, were built and adapted expressly for Messrs. Popham & Sinclair, wholesale boot and shoe manufacturers, by John Pratt, Esq., of this city. They are of cut stone, five stories in height, and among the finest buildings in that quarter, of the city, their external appearance being at once attractive and imposing. The first story is occupied by the wareroom, where a vast variety of boots and shoes are on exhibition. Every kind of work is represented here, as well as every price. Boots and shoes of all descriptions, from the infant's to the adult's, leather of all descriptions, from the sort destined to skim along the drawing room to the kind destined to tread the roughest places, is here to be found, worked up in the very best style. It will give an idea of the diversity of the contents of this wareroom when it is stated that no fewer than one hundred and fifty different styles are here represented. The second story is devoted to the purposes of a cutting room, and in this place machinery plays the most important part.

There is an instrument which at one snap cuts out the sole of a boot or shoe from a side of leather. A machine of the die stamp strikes out a heel of any size whatever. One machine rolls out in a second a piece of sole leather the human hand could not roll out in the space of a day. And so on through every process a boot or shoe undergoes, the machine by its power, saves an immense amount of manual labor, and affords a striking proof of human ingenuity. The third room is called the machine room. Here large numbers of young women are busily engaged in operating upon sewing machines. The light work on ladies' boots and shoes is performed in this department, and it is wonderful to see the rapidity with which the uppers and quarters, in cloth and leather, can be stitched together. The sewing by these machines is more beautiful than the human hand could possibly effect, and is as strong as it is showy. The fourth story is known as the pegging room, and here the soles that are not sewn, are handed in to be operated upon. The fifth story is devoted to the purpose of storing leather, and all the different sorts used in manufacture are here piled away. Messrs. Popham & Sinclair use in their establishment Canadian manufactured leather principally, along with the best English, French and American descriptions. The boots and shoes made in this establishment are sold throughout the Province, but especially in Upper Canada. From four to five thousand pairs of boots and shoes are turned out per week; and employment is given to between a hundred and twenty and a hundred and fifty persons. On account of the rapidly increasing demand for their goods, Messrs. Popham & Sinclair have determined to make large additions to their machinery, to enable them to supply their customers with promptness. Though quite a new firm, they have by their enterprise and the excellence of their goods already secured, and no doubt will continue to receive, a full share of public support.

LEATHER, HIDES, OIL, &c.

Mr. Campbell Bryson, successor to Hugh Thompson & Son, No. 15 Lemoine Street, general dealer in leather, hides, oil, &c. This is one of the oldest establishments of the kind in the city. Mr. Hugh Thompson commenced business in 1833, in St. Paul Street, where the Albion Hotel now stands; from there he removed to the premises now occupied by Messrs. Benson & Aspden, and from thence to the site of the building occupied by Messrs. Popham & Sinclair, where he remained doing a large and extensive business for about twenty-two years. In 1847 Mr. Thompson took his son, Mr. Jno. Thompson, into partnership, and the firm was carried on under the style of H. Thompson & Son until 1861, when the latter died, and in May, 1862, Mr. Hugh Thompson retired in favor of his son-in-law, Mr. Campbell Bryson, whose establishment we now propose briefly to notice. The building is four stories high, not including the basement. The first flat is devoted exclusively to the storage of sole leather, of which there is every variety. The second flat contains a great variety of upper leathers. There are to be seen here leathers of all colors, calf-skins in particular; also sheep skins. These leathers are beautifully finished, and seem to be the perfection of the tanner's art. They are light, glossy, and as pliant as a glove. There is one specimen which deserves brief mention—it is satin finished calf-skin, manufactured by Mr. DeWitt, of this city, and pronounced to be equal to the best French imported. There are also on this flat, collections of tanned cow-hide, for upper leather for strong boots; goat skin, morocco, enamelled leathers, &c. The third flat, (as the first) is devoted exclusively to the storage of sole leather, and on the fourth there is an immense quantity of beef moccasins stored. To sum up the whole, Mr. Bryson has a vast assortment of leathers of all kinds—soles, uppers, kips, calf-skins, and a selection of French and English goods, together with findings—in fact there is everything that goes to make up boots and shoes. Mr. Bryson's principal business, is receiving and selling on

commission. He makes the most liberal advances, and spares no effort to secure the best markets for those who entrust him with consignments. He has always for sale tanners' oil of the best quality, and which, wherever used, has given great satisfaction. In the business in which he is engaged Mr. Bryson possesses many facilities for carrying it out thoroughly, not easily to be found anywhere else.

ST. LAWRENCE HALL.

This hotel, situated in Great St. James Street, has for many years enjoyed a reputation for everything it at goes to make up a first class establishment; and this reputation, so enviable in itself, extends not only over the Province, but even beyond the limits of Canada. The "Hall," which is its local appellation *par excellence*, may be said to be one of the recognized institutions of Montreal, and is as familiarly known as the most prominent of our public buildings. This being the case, a brief description of the hotel may prove of interest to strangers, or to the tourist who takes up his temporary abode among us. The St. Lawrence Hall, then, is one of the most noticeable amongst the many imposing edifices that adorn Great St. James Street. Not less than five stories in height, the impression produced by an external observation is one in which massiveness and elegance are severally combined. The building is of cut stone, and so are the pillars in front of the entrance. After making his way through the groups that usually take up their position in proximity to the door, the visitor remarks that the hall is paved with blocks of white and black marble, arranged in the mosaic style. To the right of the entrance is the reading room, an apartment handsomely fitted up, and supplied with the various journals of the day, domestic as well as foreign. This reading room constitutes one of the attractions of the hotel, and is largely patronized by the guests, who, coming from all quarters are certain to find on the tables or on the shelves along the walls, intelligence from their respective countries or localities.

To the left of the entrance is the saloon, supplied with liquors of every description, and served out in every style calculated to please the palate. Passing through the hall, the visitor enters the general office, in which the whole day long, and far into the night, a host of guests and a crowd of porters are to be seen hurrying to and fro. At the right of this office is the barber's shop; to the left are the closets; and close by the entrance, is a book stall, tastefully fitted up, where an agent of Mr. Pickup has always for sale stationery, postage stamps and the leading periodicals and newspapers. Passing up the stairs that lead from the general office, the visitor enters the drawing room, an apartment richly furnished, and possessing all the requirements of such a place. The drawing room is about 60 feet long by 50 feet wide; and the ceiling is very high in proportion to the dimensions. From the ceiling are suspended three superb gasaliers, which, when lighted, bring out the fair proportions of the apartment in excellent relief. There is a mantle-piece at either extremity of the room, and over the one to the right of the entrance is a splendid mirror; while over the one to the left is another of exquisite workmanship. This latter was procured at the time of the visit of H. R. H. the Prince of Wales; it is surmounted by the British Arms and the plume bearing the old historic motto, "Ich Dien." The drawing room is furnished in admirable style. Here are the softest of sofas, the easiest of chairs, the most convenient *leves-a-leves*, the most luxurious of ottomans, while a grand piano stands ready for those who have the skill to test its melodies. The drawing room when occasion demands can be turned to the purposes of a ball-room; and here the *élite* of the city when they seek such amusement, are wont to assemble. There have been many magnificent balls in this place, and few rooms are better adapted for those who sympathise with the ardent exclamation of "Childe Harold,"—

"On with the dance, let joy be unconfined,
No rest till morn when youth and pleasure meet,
To chase the glowing hours with flying feet."

On leaving the drawing room, the visitor is conveyed up three flights of stairs, each stair-case terminating on a corridor, from which in every direction bedrooms stretch over the building. Arrived at the head of the fifth flight, there is an ascent to the cupola of the hotel, whence there is a magnificent view of the city. Facing toward the street, the eye takes in the gigantic proportions of the Victoria Bridge, the River St. Lawrence, St. Helen's Island, St. Lambert, and the lofty mountains far away in the back ground; while another view discloses the forest of masts within the harbor, the domes, spires and towers of the buildings of which Montreal may so well be proud. Facing about, "the mountain," which has given its name to this city, looms up grandly in its "pride of place," and challenges the admiration of the most unimpressible spectator. Between the mountain and the post of observation, the intervening spires, the public edifices, the manufactories, the elegant private residences, the dwellings of lesser pretension, the crowded thoroughfares—all these scenes, on every side striking and attractive, make up a panorama so grand and so diversified, as scarcely to be equalled on the North American continent. An iron gallery leading from the St. Lawrence Hall proper spans Fortification Lane, and conducts to the building recently erected in Craig Street. It is in this part of the "Hall" that His Excellency General Williams, Commander of the Forces, as well as Lord Paulet, Commander of the Garrison, and their respective suites; together with a number of officers of the Guards take up their quarters, their servants being located in the basement of this building. Threading the numerous corridors, in an endeavour to find the way out of the "Hall," would be a difficult task, to a stranger. To describe the different flats, the number of rooms they contain, or any other fact with regard to their location is an equally difficult undertaking. It must, therefore, suffice to say that the St. Lawrence Hall contains altogether 247 bedrooms; and as two-thirds of these are supplied with double beds, the whole is equivalent to about 400 single rooms. These apartments are well lighted, airy, com-

modious, and the furniture is of the most fashionable description. There is nothing wanting that can add to the comfort of the guests. On the third story are the bath rooms, which are supplied with hot and cold water. Descending to the general office of the building, the visitor, after traversing a corridor, is shown into the public dining room. This is a splendid apartment, in every sense of the word. The room is tastefully decorated,—mirrors round the walls,—the ceiling panelled and painted,—and three noble pendant chandeliers. No fewer than 350 persons can be accommodated here. There is also an arrangement by which small parties can dine by themselves. Adjoining this is a private dining room, for the accommodation of families. In proximity to the public dining room, is the carving room, where there is a steam table, on which the dishes are kept hot until the time arrives for their being served. The whole of this department is under the effective management of a head waiter, and staff. A flight of stairs conducts from this flat to the billiard room, where there are six tables. In the basement of the hotel are the store room, the larder, the kitchen with its six ranges, the scullery, the dining room for private servants, and the laundry, where clothes, after having been washed, are dried by steam. The kitchen contains a steam boiler, which supplies the baths with warm water. The cellar extends under the whole building, and contains an immense variety of wines and *liqueurs* of every description, procured at great trouble and expense.—The St. Lawrence Hall, among other advantages, has a situation for convenience hard to be surpassed, being as it is in the centre almost of the principal public buildings in the city. As a proof of the estimation in which the St. Lawrence Hall is held by those in the highest positions, it may be mentioned that when the Prince of Wales visited Canada, the Government, during his stay in this city engaged a large part of the building for the accommodation of the suite of His Royal Highness. And during the two occasions on which His Excellency the Governor General visited Montreal, he and his suite took up their residence



in this hotel. The St. Lawrence Hall owes its present position to Mr. H. Hogan, who has been the proprietor for over twelve years, and whose urbanity, gentlemanly deportment, and administrative ability, have combined to win for himself and establishment golden opinions from all who have been guests at this hotel.

CARVING AND GILDING.

It may be accepted as a rule, that in a new country, the progress of the fine arts denotes an increase in material prosperity. Of the correctness of this rule, as regards Montreal, the establishment of Mr. A. J. Pell, carver and gilder, looking-glass and picture-frame manufacturer, Great St. James Street, affords proof. There are to be seen many very beautiful and valuable paintings and engravings, both imported and of native production, framed and mounted in a style worthy of their artistic excellence, reflecting great credit on the taste and workmanship exhibited. Some of the looking-glass frames are of great size and are splendid specimens of carving and gilding; many of these are eight feet in height; the designs are highly ornamental and are innumerable in their variety. There is at present in course of construction a magnificent pier glass, which embodies an excellent artistic idea; it is so formed that the body of the frame joins above with the cornices of the windows of the room. The effect of this arrangement is, that the cornices of the chamber windows will seem to be continuations of those of the pier glass; adding thereby to the apartment a splendor not otherwise attainable. This is only one example of the different glass frames constructed in this establishment. There are many such, differing in size as well as in design; but one in particular of the smaller kind, at once arrests the attention of the observer. It is known as a "stem frame;" it is very finely formed, and the sides curve and fall away like the branches of a willow. The designs for the frames manufactured here are prepared exclusively on the premises, a fact which speaks well for the talent employed. Last

Fall, a large number of mouldings, of the best London patterns, were brought to Canada by Mr. Pell. They ought to be seen to be appreciated. The work-shop possesses every facility for the construction of the articles enumerated above. A powerful steam engine drives machines for cutting such complicated patterns and mouldings as the human hand could never effect; and everything necessary for a successful prosecution of this beautiful branch of skilled labor, is here to be found in profusion. The pier glass, with cornices to join those of the windows, mentioned in the preceding part of this article, was a "great rage" in London last year; and it is believed that a similar specimen is not to be found in Montreal. Mr. Pell also manufactures to order, carvings in wood, of such objects of ornamentation as the Royal Arms; he has already disposed of quite a number of them. It may be stated, in conclusion, that Mr. Pell's show-room, adorned as it is with exquisite pictures and correspondingly beautiful frames, is well worthy of a visit from all who can appreciate art in its most attractive branches.

MONTREAL TUBE DEPOT.

The premises bearing the above name are in St. Paul Street, No. 250, being occupied by Messrs. Thomas Robertson & Co. The building is in an excellent business locality, being scarcely a stone's throw from St. Francois Xavier Street. The firm occupy the first and second flats, having the advantage of a good store in rear for their stock. The show room is a neat and commodious apartment, lighted by a large window, capable of displaying stock to the best advantage. The second flat, a roomy, well lighted apartment, is used as a store-room for sail-cloth and sacking—a large branch of their business—and is well adapted for the purpose. This firm has made the trade in tubing and fittings a specialty, and from the nature of their arrangements, connections, and experience, are in a position to execute orders in a manner to give their customers entire satisfaction, both as regards quality and price of stock. In the store may

be seen, besides a large and superior display of tubing and fittings, a stock of tinamiths', gas-fitters', plumbers', and bell-hangers' findings of all descriptions; also, brass, iron and copper wire, sheet metals, metallic stove-pipe protectors, glass tubes for steam boilers, guage cocks, &c. The latter, which are of English manufacture, owing to their superior temper, are preferred to other kinds which are more brittle and consequently more expensive. Besides the above, all of which the firm imports from the best and most reliable sources, Robertson & Co. exhibit in their store beautiful specimens of ornamental zinc sheeting for window blinds and door panels, a species of goods fulfilling the conditions of perfection, in being not only pleasing to the eye but thoroughly adapted to the useful purposes for which they are designed. Iron and brass fittings for pipes, ornamental fret work of zinc, iron (pig and bar), lead, copper, tin, zinc, antimony and other metals, together with all supplies for workers in metals, must be added to the catalogue of importations by Robertson & Co., who seek and procure the best articles for their business, in the English, Scotch, Irish and American markets respectively.

CABINET MAKERS AND FURNITURE DEALERS.

Although there are several establishments of the above description in the city, another of the same kind has been opened within the past year, at No 71 Craig Street, corner of Bleury Street. This place is owned and conducted by Mr John Thornton, who devotes undivided attention to the business in which he is engaged. The furniture here for sale is of a very superior description; while the tasteful style of a large portion of the goods, and the beauty of the workmanship, claim public attention and patronage. Every article manufactured on the premises is made of our native woods, and, as is well known, these, when properly manipulated, are susceptible of a high degree of polish and of ornamentation, both of which qualities will be found to characterise the products of Mr. Thornton's workshop. There is also to

be found in this establishment a varied assortment of goods produced by the best manufacturing houses in the Province. To speak in special terms of commendation of the manufactures of any one in particular may seem unnecessary; yet it is but fair to say that the articles turned out of the workshop of Mr. Thornton will well stand comparison. This gentleman imports nothing whatever from the States, being one of those who believe that our own resources and the skill of our native workmen are amply sufficient for all our requirements. Mr. Thornton has on hand a first-rate assortment of every article manufactured by cabinet makers—of every piece of furniture, in fact, used in house-keeping, and the price demanded is as low as possible. It may prove of importance to intending purchasers to remark that no article sold by him is sent home without being strictly examined; and after this it is conveyed to its destination free of charge. This is a new warehouse, and if conducted on the principles on which it is begun, will prove a sturdy competitor of those of longer standing and reputation.

ST. LAWRENCE ENGINE WORKS.

These works, now carried on by Messrs. W. P. Bartley & Co., were first established in the year 1849, by Messrs. Gilbert, Miln & Bartley. They are situated on the bank of the Lachine Canal, running back to Mill Street, on the river side. Their location secures every possible facility for the speedy and economical reception and delivery of material for either inland or ocean transportation, and saves all expense of cartage. The main building, which is on Mill Street, is substantially constructed of brick, is 165 feet in length by 50 in width, two stories in height, and contains a large basement, in which are stored the various patterns, &c., employed in the works. As the name implies, engine and boat building are the principal business of the firm, but they also do a large business in the manufacture of all varieties of machinery for mills, boilers, hydrants, patent steam and other pumps, cranes, windlasses, &c., besides railway work and all,

descriptions of iron castings and forgings. On the first floor are the machine shop, blacksmiths' shop and office. The machine shop is provided with every labor-saving convenience and is well furnished with the most improved and powerful machinery, including lathes of every description. They have also a very extensive stock of patterns for mill machinery; steam engines of various descriptions, viz.: beam horizontal, oscillating with conic slide and Corliss' valves, several of each description having been made at these works and are now in successful operation. The boiler shop contains punching, shearing, drill and plate bending machines. The machinery is driven by water power, obtained from the Canal. One of the largest punching and shearing machines in this city may here be seen in operation; by it, holes are rapidly punched through iron plates of more than an inch in thickness, with as much ease as if they were pieces of card-board; and plates, fully as thick, are clipped with equal facility by the powerful shears; in fact, iron here seems to have lost its traditional hardness, offering little more resistance to the ponderous machinery than a piece of cloth to the tailor's shears. This huge drilling and clipping machine weighs over six tons, and works with astonishing ease and rapidity. There is also a monster lathe, on which has been bored the cylinder of the largest steamer made in Canada—the "Mon'treal's" 60-inch cylinder having been bored on it. Another, called a gap lathe, is capable of swinging a casting of ten or twelve tons, should such be required. The peculiarity of this lathe is, that the shears are movable, forming a gap, which enables it to admit a mass of metal of twice the diameter that could be accommodated were there no gap. In another, principally used as a chuck-lathe and boring-mill, a mass of metal ten feet in diameter can be swung; this lathe has a face-plate measuring six feet six inches in diameter; on it a pulley for a steamboat, nine feet six inches in diameter, was turned. Having for its base an immense smooth stone, it works with great steadiness and evenness. A mammoth planing machine is also to be seen; it is capable of planing a piece of metal of 11-

most any thickness, and of the largest size, in a speedy manner. The machine is five feet broad and twelve long, and is a model in its way as regards form and operative capacity. There are besides, a number of smaller planers, and also a shaping and nut-dressing machine, in the most serviceable order. The proprietors have facilities for doing the largest jobs ordered; their premises and machinery having been designed with regard to the requirements of an extensive business, and the turning out of the heaviest as well as lighter kinds of work. They are now altering the steamer "Iron Duke," raising her hull three feet by placing an iron band round her. At the West end is the blacksmiths' shop, where the forge work is performed; and here are enormous cranes, used for hoisting in heavy machinery, engines and so forth for repair, whence they are conveyed on a car to any part of the establishment required. This description of work on being completed for delivery, is laid down either on the canal or river side in the same way, without inconvenience or loss of time. A large scale at the entrance is used for weighing, and a glance at once satisfies one of its ability to meet all requirements. The office is also at this end of the building. The second story consists of one large room, only a small portion of which is occupied by the firm for the exhibition of various kinds of machinery, wheels, pulleys, mill-work, and models of steam-engines. The remainder is at present unoccupied, and Messrs. Bartley & Co. having ample accommodation in the other portions of their extensive establishment for their own operations, purpose leasing it to any party or parties requiring room for light manufacturing purposes. In front of the main building, and on the canal bank, is a large boat shed, where barges and steam-boats are built. A vessel 175 feet long can be built in this shed, from which a number of fine iron vessels have been already launched, among which we may mention the steamer "Kingston," built in 1854, for the Upper Canada Royal Mail Line; and the splendid steamer "Montreal," built in 1860, for the Richelieu Navigation Company; also a number of iron barges for Messrs. Edmonstone,

Allan & Co.; and several light-ships for the Trinity Board and Provincial Government. Messrs. W. P. Bartley & Co. have also another establishment at Sorel, for the manufacture of engines, boilers, iron steamers, mill machinery, &c. In this establishment they are also well provided with lathes, boring mill, planers, drilling and screwing machines, &c. The machinery in these works is driven by a high pressure oscillating steam engine of twenty horse power. These works have equal facilities with the St. Lawrence Engine Works for shipping and receiving, having a wharf frontage of some two hundred feet, where the largest vessel can come alongside with, or to receive freight, or for the erection of their engines and boilers, shears being erected on the wharf to handle the largest boilers or parts of engines, placing them on board with the greatest facility; here every attention has been paid to economise both time and labor. Messrs. Bartley & Co., from their extensive facilities and long experience, are in a position to execute any orders with which they may be entrusted, at the shortest notice and in the best manner.

ARMSTRONG'S CABINET-MAKING AND UNDERTAKING ESTABLISHMENT.

These premises possess an advantage which is enjoyed by only a limited number of business houses in this city, namely, a double frontage. Situated as they are at the south-west corner of Victoria Square, they have one frontage thereon of 120 feet, with another on Craig Street of 80 feet, and are three stories in height. The steady increase of his business during the past ten years encouraged Mr. Armstrong annually to extend his borders; but finding his premises still too limited, he determined this spring to erect a suite of new buildings, comprising factory, show rooms, undertaking department, and dwelling. The carrying out of these improvements necessitated the removal of a block of buildings familiar in the memory of our oldest citizens. While thus securing more accommodation for the various requirements

of his calling, Mr. Armstrong has not been unmindful of a becoming architectural design, which contributes in no small degree to the ornamentation of Victoria Square. The first and second stories are occupied as ware and show rooms; the third as a finishing room. In chamber-sets of chesnut, oak, and black walnut, he does a large business, these articles being made with great care, and with an eye to ornament as well as durability. A great many sofas are manufactured in Mr. Armstrong's establishment, and under his personal supervision. Every article which leaves his factory is guaranteed of first-rate quality. There is always on hand a variety of spring mattresses and spring-bottomed portable beds. The latter are very useful and have a large demand. Some of the chairs are finely carved and upholstered, and for excellence of workmanship it would be hard to excel them. He has cane-bottomed chairs of every description, well-made, durable and cheap. In the wareroom are also to be found parlor sets, extension dining tables, marble-top centre tables, and oak and black walnut hat stands. Mr. Armstrong manufactures some very handsome book cases in mahogany and black walnut. It is well to observe here that the greater portion of the furniture he has for sale is manufactured on the premises. This is an important point; and it is to be hoped that this will always be a feature in our manufactories. In addition to his business as cabinet-maker and upholsterer, Mr. Armstrong carries on that of an undertaker. In this calling he is so well and favorably known to our citizens generally, as to render any remarks here unnecessary. He has every facility for the proper performance of the duties of an undertaker, and is sole agent for the sale of "Fisk's Metallic Burial Casket." This casket possesses, besides other merits, the advantage of being perfectly air-tight. It remains only to say, that all orders entrusted to Mr. Armstrong will be faithfully and satisfactorily carried out.

COSMOPOLITAN HOTEL AND RESTAURANT.

This popular and widely known establishment, Mr. F. C. Gianelli, proprietor, is one of the most pleasantly situated buildings of the kind in the city, and perhaps the most central of any, being on the north side of the Place d'Armes. It has in front a handsome park, known as the "French Square," a general summer resort of the inhabitants of the centre of the city. On the east side of the square stands the great Parish Church of Notre Dame, south of which and almost adjoining, are the prominent buildings known as the Seminary of St. Sulpice. The west side of the Square is occupied by three of the leading monetary institutions of Canada, viz.:—the City Bank, the Bank of Montreal, and La Banque du Peuple. On the south side are the new massive buildings of the Ontario Bank, the London and Liverpool Insurance Company, and several other magnificent structures recently erected and occupied by various public institutions. In the immediate vicinity is the Post Office, the Bank of British North America, and several Telegraph offices; while the Express offices adjoin the Cosmopolitan itself. This hotel is conducted on the European style, a system which appears to give general satisfaction. The building possesses the advantage of a fine external appearance, being of cut stone and five stories high, with ninety feet frontage, and is provided internally with every convenience necessary to the comfort of travellers or transient visitors. During the past year a great many improvements have been made in this hotel; and although former accommodations were ample, they have been increased still further, Mr. Gianelli having spared neither money nor efforts to make the Cosmopolitan a veritable "home," in the fullest sense of that term. On the right of the front entrance is an apartment used as a depot for heavy luggage, &c. Passing through a capacious arcade, the office is entered, where arrivals are registered, &c.; adjoining the office is a centre hall, on the left of which is a neatly fitted up oyster stand, attended by an expert opener; this hall divides the office from the saloon, which

latter place is tastefully arranged and fitted up with marble-top counters and tables, comfortable sofas, chairs, &c., and shelving in the Parisian style; here are to be had oyster patties, mutton pies, and refreshments of every description of the very best quality. Ascending the stairs leading from the office to the second flat, the visitor enters the ladies' reception hall, which is furnished in admirable style, the walls also being appropriately adorned with paintings, prominent among which are life-sized portraits of Her Majesty Queen Victoria and His late Royal Highness Prince Albert. Turning to the right from this hall, a small but handsome dining room is entered, the windows of which look out upon the Square below; this room is fitted up in the "Club" style—the tables intended to accommodate four persons each occupying suitable positions round the room, while in the centre is a magnificent Parisian stand, containing various sets of delf and plate, knives, forks, spoons, cruets, &c., all scrupulously clean and bright. At either end of the room is a handsome marble mantel-piece, over which a large and richly mounted mirror is affixed, and beautiful oil paintings ornament the walls. Passing again through the hall, and turning to the left, another dining room of larger dimensions, and fitted up in the Italian style, is entered; the tables here are divided from each other by rich damask screens—a capacious side-board being at each end of the room; the chairs, settees, &c., of the best and most comfortable description. From this apartment a small flight of stairs leads to the concert reception hall, and thence to the magnificent concert room, the dimensions of which are about sixty feet in length, by about forty feet in width; a number of Corinthian pillars supporting the ceiling down the centre of the room, add greatly to its appearance; the windows on one side look out upon Little St. James Street, while those on the other look into the large court below. This room is furnished in the brilliant style of a "*Café-des-Tuilleries*." Along either side of the walls is a number of small spring-seat sofas, fronting each of which is a neat oblong marble-top table, with cast iron frame. Down the centre, on either

side of the pillars, are rows of round marble-top tables, *dos-a-dos*, accompanied by comfortable cane-seat chairs of French pattern; the walls are gorgeously papered and panelled; four magnificent gasaliers suspend from the ceiling; while several large and beautifully chaste mirrors complete the decorations. At the north end of the room a small stage is erected, upon which is an elaborately finished piano, and here an array of vocal and musical talent of no mean order is nightly supplied, gratis, for the entertainment of his visitors, by the enterprising proprietor of the Hotel; a small apartment at the side of the stage is used as a dressing room by the performers. At the south end of the room is the "Poutagère," where delicious beverages are manipulated and passed round by attentive waiters to the different tables. The bed-rooms on each flat are airy, well ventilated, and comfortably furnished with spring beds, sofas, chests of drawers, &c. Bath rooms and closets are to be found on each corridor. The cellar contains the very best qualities of wines and liquors of every description. The *table d'hôte* attached to this establishment is conducted on a novel principle in this city; and although in excellence of viands, good attendance, cheapness, &c., it is all that could be desired, it has the additional advantage that, without extra charge, any one who so wishes, may dine alone. This restaurant is so well known to the citizens, that little is required to be said in its favor; but for strangers, or parties at a distance, it may not be out of place to observe that it would be difficult to select a better place for supplying the wants of that insatiable personage, "the inner man."

PRINCE'S LONDON MUSIC WAREHOUSE.

The music warehouse of Mr. Henry Prince, 145 Notre Dame Street, is well known to our citizens as a repository of everything pertaining to the province of sweet sounds. There is to be found in this warehouse, music of every description, from the most sublime composition of Handel to the simplest score that ever was fingered. In sheet music Mr. Prince has the advantage of most

other houses in the city or Province; the latest music issued in Europe is sure to find its way to his warehouse; and there is nothing that has received the *imprimatur* of public approbation on the other side, but speedily finds its way to this side of the Atlantic, and displays itself on his shelves. Besides all this, Mr. Prince himself is a large music publisher, and has introduced to the notice of the community not a few native effusions of real merit. He has constantly on hand a great variety of violins, flutes, guitars, concertinas, accordions, sax-horns, cornets-a-pistons, and every other musical instrument in common use. He supplies instruments for bands in every part of the Province, and every article that leaves his warehouse is guaranteed perfect of its kind. He also supplies and arranges music in score and in parts. Mr. Prince is the successor of Mead Brothers, who, thirty or forty years ago, were the only manufacturers of pianos at that time in the Province. He is well known as a composer of no mean order, and has as much skill in weaving beautiful verses as in noting down beautiful tunes. As a practical musician, Mr. Prince has earned more than a local reputation. The citizens of Montreal should never forget his assiduity, the toil and expense he incurred in the effort to establish a public band that should be properly qualified to take part in all our celebrations. He has furnished his warehouse like one who understands his business. An artist himself his selections have been made accordingly. It only remains to add that those who desire the best music, and the best instruments with which to give it utterance, will always find both at the London Music Warehouse of Mr. Henry Prince.

LACES AND EMBROIDERIES.

The wholesale and retail establishment of Mr. James Parkin, 168 Notre Dame Street, is the only place in this city where laces and embroideries of every kind are made a specialty. The shop, as viewed from the exterior, presents a very attractive appearance, the windows being

ample enough to afford opportunity for an always effective display of the beautiful fabrics which constitute the main portion of Mr. Parkin's business. The first floor is occupied as a sale-room, and judging from the number of attendants required to wait upon the customers, one cannot help thinking that the taste of the ladies of this city for superior articles of personal decoration, is not only well established but on the increase. The second story is appropriated to the purposes of a show room. To give an idea of the specimens of laces and embroideries here on exhibition would require the aid of the pencil, as the pen is incapable of describing such "fabrics rich and fairy fine." Here are to be seen shawls made in Chantilly and Malta, as well as those of Nottingham, of patterns the most exquisite; some of these beautiful articles of apparel are made entirely by hand; in texture they are as fine as gossamer, and are interwoven with groups of flowers so artistically combined, so deftly and delicately executed, that while admiration is excited by the truthfulness with which they represent nature, a feeling of wonder is aroused at the patient industry which incorporated them on the almost impalpable material which they adorn. As articles of dress they are singularly attractive, and possess, at the same time, beauty and durability. On the same floor there are to be seen a great variety of British and foreign laces, head-dresses, collars, sleeves, capes, jackets, caps, veils, and made-up articles of muslin and embroidery, which must be viewed in order to appreciate the excellence, variety and richness of the different embellishments. It is common to understand the phrase "the Fine Arts" as applying only to painting and sculpture, but a visit to the show room of Mr. Parkin would seem to establish the fact that the "Fine Arts" play an important part in the matter of personal decoration. The ladies' outfitting department occupies one side of this room also. The third story of the building is used as a workroom, where a number of expert *artists* are employed in filling the orders that are received. Mr. Parkin commenced business fourteen years ago, and as far as this city is concerned, may be said to be the founder of

the trade in laces and embroideries. His stock is imported direct from Great Britain and the Continent of Europe, and is the same as would be found in first-class houses in London and Paris. He receives, weekly, novelties in his line of business as soon as they make their appearance in England or the Continent, having correspondents in London, Paris and Brussels; and without pretending to enter into competition for mere cheapness sake, where quality and style is not taken into consideration, his special aim is to keep articles of a *reliable character* at fair and reasonable prices, trusting by this means to uphold the reputation he has already gained, and to secure a continuance and increase of the liberal support he has received during his business career.

MONTREAL MALLEABLE IRON WORKS.

These works, owned by Johnson, Thompson & Co., are situated in Nazareth Street, Griffintown, and cover about an acre of ground. These are the only works of the kind in this city or in Canada, and have been in operation ten or twelve years. There are few persons, perhaps, who understand much about the process of manufacturing articles made of *malleable iron*, or who can discern the difference between this metal and common cast iron; to such it is hoped the following details may prove of interest. In order to make malleable iron it is necessary, in the first place, to mix three sorts of iron in certain proportions; these are then placed in the furnace, and when melted are run into bars, or what is technically known as "pigs." These "pigs" are afterwards broken up, again pass through the furnace, and then are ready to be run into the moulds and made into castings. As soon as these castings cool, they are placed in an annealing furnace, which is perfectly airtight, with the exception of one or two insignificant apertures to allow the escape of gas. The castings remain in this furnace, subjected to a uniform heat, for six days and as many nights; they are then taken out, and are found to have undergone a remarkable change, which

consists in this, that when put in they were almost as brittle as glass, and now they have become so tenacious that they may, if sufficient force be applied, be hammered out like lead, and like lead retain elasticity not to be overcome. After the castings have been withdrawn from the annealing furnace, they are placed inside a hollow cylinder, which is made to revolve, and thus they are polished by their own friction, and are made ready for the market. The several processes just described are all carried on in this foundry, under the superintendence of Mr. W. O. Thompson, one of the partners. This gentleman has devoted the greater part of his life to the business in which he is engaged, and in the year 1826 manufactured the first malleable iron ever made on this Continent. In the United States the production of malleable iron is looked upon as a most important branch of the industry of the country; and large quantities of articles made from it are exported every year, something like five hundred tons annually going to Europe. Messrs. Johnson, Thompson & Co., are carrying on a large trade; they manufacture articles of every description, including those most extensively used in the mechanical arts, such as couplings for gas, water and steam pipes; wrenches, nuts for screws, fastenings for doors, &c.; also ornamental work of all patterns, and numberless other appliances to which iron is put in the requirements of industry and domestic life. An idea of the demand for their manufactures may be formed from the fact that, notwithstanding all their facilities, they find it impossible to supply not only the Province but the city with a sufficient quantity of one article, namely, the couplings for gas, water and steam pipes, to which allusion has already been made. There are turned out at these works articles of a somewhat novel nature for a foundry, such as frames for revolvers and rifle gun barrels; the latter are so thoroughly tempered and so close in the grain as to be considered equal to cast steel. The foundry also turns out all kinds of gun mountings, teeth for mowing machines, and all the different castings required for sewing machines. The moulding room of the foundry,

when a casting is about to be made, presents a very animated appearance. The moulds are ranged in rows along the floor, each containing an aperture for conveying the molten metal into the interior. The workmen, each with a ladle in his hand, take up their position in front of the furnace, which, driven by a blast, supplied by a powerful engine, and conducted underground, roars with appalling fierceness. At a given moment the furnace is tapped, the metal rushes out in a dazzling stream, scattering showers of sparks in all directions; it is caught in the ladles already mentioned, and then quickly poured into the moulds, where, in a comparatively short time, it cools sufficiently to be removed. In the preparation of malleable iron, a great deal of skill and watchfulness are imperatively demanded. For instance, in the matter of tempering the iron, the following illustration will serve to explain our meaning:—in the manufacture of small keys, such as are used for valises, it is necessary to have the temper so nicely adjusted that while the outside of the key shall be both hard and elastic, the inside must be so soft as to admit of being bored without turning aside the drill. The firm always keep on hand a stock of the staple articles of their manufacture; this stock is stored away in a flat above the moulding room, and comprises almost everything made of malleable iron. There is a very ingenious machine in operation for cutting the "threads" on couplings; these "threads," as they are technically termed, are nothing more than the convolutions inside a nut, by which it is enabled to retain the screw. The machine is so arranged that it can cut the "threads" on nuts of any size; it is extensively used for "threading" couplings for water, gas and steam pipes, and can effect the operation at any required angle. There is a large machine shop in the foundry, fitted up with all modern mechanical appliances for finishing all kinds of work. There is also a blacksmith's shop in full operation. In connection with the malleable iron works, and driven by the 35-horse power steam engine attached to the former, is the threshing machine manufactory, occupying an extensive build-

ing, two stories in height. Here there are constructed machines of one and two-horse power, ranging in price from £25 to £60. These machines, of which about two hundred are annually manufactured, are in great demand over the Province. This workshop also turns out winnowing and straw-cutting machines, and clothes wringing machines, of Odell's patent; as well as circular saws for cutting cord-wood, of which they have supplied a considerable number to the Grand Trunk. The number of men employed in the malleable iron works and in the threshing machine manufactory is about fifty. Both establishments are in successful operation, and as contributing largely to our native industrial products, are a credit to the enterprise of the proprietors, and gratifying evidences of our progress in the mechanical arts.

CHINA, STONEWARE, EARTHENWARE, &c.

John Patton & Co., 73 Great St. James Street, are extensive importers of French and English china, stoneware and earthenware, as well as cut, engraved and pressed glassware. The store, which is about 30 feet in breadth and 120 in length, is admirably suited to the purposes of display and accommodation. The two front windows, which are of plate glass, are highly attractive, owing to the beauty and variety of the articles exhibited. To describe, accurately, even a few of these articles, would be an impossibility, for personal inspection is the only method by which an idea of their excellence as works of art can be obtained. In these windows may be observed dinner sets of the handsomest description, vases of the most exquisite design, statuettes in Parian ware, carefully finished and representing such historic personages as King Robert Bruce, Sir William Wallace, Michael Angelo, Raphael, and others equally illustrious and known to fame. In one of the windows is an object which at once arrests the attention and excites the admiration of the spectator; this is a Flower Bowl or vase made of glass, but so beautiful in

shape and model, enamelled and gilded with such rare skill and taste as to appeal instantly for recognition as an undoubted work of art. This Flower Bowl, when shown at the London Exhibition, won the prize for its fortunate possessor. The inside of the store presents a superb collection of everything coming within the scope of Mr. Patton's business. The assortment of vases is varied and valuable. There are few patterns of acknowledged excellence which cannot be obtained here. The vases are of all sizes and colors, and are well worthy the notice of every admirer of art; some of the designs from the antique are splendid, and are copied with an accuracy and brilliancy of coloring which can scarcely be too much admired. As regards the display of chinaware, it may be safely asserted that it cannot be surpassed in this city or in Canada. The decorative art has been called into the fullest play to make attractive articles which even when plain are considered beautiful. Those china sets are ornamental in the highest degree, and are free from the glaring colors, inharmoniously blent together, which so often mar what they were intended to beautify. The coloring is chaste, well judged and effective, and is the work of skilled artists who devote their time exclusively to this object. The dessert and *tete-a-tete* sets in particular, are noticeable specimens of artistic finish; the colors are all laid on by hand, and the designs of fruits and flowers are in happy imitation of nature. In the matter of glassware Patton & Co., display a splendid assortment of articles. The pitchers, in cut glass, are beautiful examples of the perfection of workmanship in this material. Some of these pitchers are models of taste, and when one views the ornamental style in which they are made, and the various striking devices they present, a sentiment of wonder arises as to how it is possible to create out of such a brittle substance so many diversified forms and adjuncts of attractiveness. Not a few of the pitchers have engraved on their sides representations of fern leaves, mosses, lillies and other plants, the effect of which design is as beautiful as the most fastidious eye

could desire. The demands of the toilet can be amply satisfied as far as elegance and utility are concerned; for there are scent bottles here, stained of various colors, exquisitely gilt, handsomely shaped and worthy as far as appearance goes, to take their place beside any ornament whatever. One article in glass, called the Exhibition Vase, and said to be the invention of the Duchess of Sutherland, is certain to attract the attention of the visitor; it is a tall shaft, with a circular plate of glass near the top, and is used for the purpose of supporting wreaths of flowers; when so decorated, the exhibition vase amply sustains the verdict which awarded it a prize at the London exhibition. The stock of goblets, which Patton & Co. have on view is large and varied. The visitor or purchaser will find wine glasses of every description, made in the finest style and of the purest material. Then there are decanters of every design, tumblers, &c.; in fact every article into which it is possible to convert glass seems here to be represented, and that, too, in a manner not to be surpassed. The assortment of earthenware is very extensive, and comprises everything used in the details of domestic life. The second story of the building is used for the purpose of a general storeroom. The basement is very commodious and contains three large rooms, besides a general storeroom and packing room. A person would at first imagine, on seeing the shop from the front entrance, that the retail business was the chief occupation of Patton & Co., but further inspection would disclose the fact that an immense wholesale trade is transacted by the firm. The premises extend from Great St. James Street to Fortification Lane, but at the present time the view of their entire length from the shop is interrupted by an arrangement intended to throw light upon the rear of the building. It is a pity to have the *coup-d'ail* of the place marred by this obstruction; but we understand from Mr. Patton that this defect will soon be removed; when this alteration is effected, the shop will be second to none in this street for attractive appearance, size and accommodation.

COE'S SUPER-PHOSPHATE OF LIME

The science of agriculture, of late years, has advanced with rapid strides, and this has been owing, in no small degree, to the attention which such practical chemists as Liebig have given to the subject of improved manures, and to the success that has attended the employment of their discoveries when tested by intelligent farmers. It would be beyond the scope of this article to enumerate the different manures that have been brought under the notice of the agricultural community; they have been various and more or less effective in stimulating the productive properties of the soil. But a new manure has been lately introduced in Canada, which promises within a short time to supersede most, if not all, of those that have preceded it—we allude to Coe's super-phosphate of lime. The factory of Mr. Coe is situated on the Canal, near the sugar refinery, the office being in St. Francois Xavier Street. Mr. Coe began the manufacture of the super-phosphate some fifteen years ago, in Middletown, Connecticut; here about a thousand tons are prepared yearly. In 1854 he established a branch concern in Boston, which turns out annually between three and four thousand tons of the fertilizer. Mr. Coe, since the periods just named, has introduced improvements in the manufacture of the super-phosphate, for which he secured a patent in the United States in 1862, one in England in July, 1863, and he has recently obtained one for Canada. The method of preparing this valuable fertilizer was discovered by a German chemist about a quarter of a century ago; it consists in adding acid to calcined bones, by which means the phosphate contained in them is rendered soluble, and the fertilizing properties of the bones increased twenty-fold. The super-phosphate, wherever tried, has invariably achieved the results which the manufacturer claims for it. There is a large number of testimonials from farmers who have used it, and they all agree in stating that as a manure for the farm and the garden, it surpasses every other. The

testimonials contain internal evidence of truthfulness, and among other corroborations of the efficacy of the super-phosphate, the following may be taken as an illustration: four rows of corn were planted, the manure used being 38 pounds of super-phosphate, the value of which was ninety cents. The yield amounted to five bushels of good, and a quarter of a bushel of poor, corn; a load of barn manure, valued at \$1.25, produced only four and a half bushels of good corn, and a quarter of a bushel of inferior. In instances where Peruvian guano and "poudrette" have been applied to lands, along with the super-phosphate, the latter, from the moment the plant appeared above ground, until it was fully ripened, evinced its superiority to the other two manures. For wheat, corn, potatoes, squashes, tomatoes, cucumbers, beets, cabbages, carrots, early lettuce, tobacco, &c., this manure has been repeatedly proved to be unequalled; it has also the effect of protecting potatoes from rot and white worm, and is also a preventive of the ravages of the corn mole. The super-phosphate of lime is a valuable article in promoting the growth and increasing the fibrous roots of young trees and grape vines, and when applied in liberal quantities to the roots of bearing trees has a beneficial influence on the size and beauty of the fruit; it is equally useful as a fertilizer for cereals and grasses. An experiment with carrots showed the following results: a certain piece of old sward land, turned over the previous year, was divided into three equal lots of one-eighth of an acre each. The lot No 1, with $1\frac{1}{2}$ cords manure, valued at \$8, produced 75 bushels of carrots; lot No. 2, with 50 pounds of guano, valued at \$1.50, produced 60 bushels; lot No. 3, with 50 pounds Coe's super-phosphate of lime, valued at \$1.25, yielded 90 bushels. A fact like this, well authenticated as it is, requires no comment, and speaks for itself. If we reason from chemical principles we should say that the super-phosphate contains more of the fertilizing element than any other substance used in agricultural operations; and it is well known that the application of this substance to the long, named

pastures in Cheshire, and other districts in England, has been attended with the most successful results. The super-phosphate affords immediate support to the plant in its tender state, before its roots expand sufficiently to reach the other manures, and keeps it growing vigorously during the first period of its growth until fairly started; the start thus given is continued during the season, and the plant ripens from ten to fourteen days earlier than under ordinary circumstances. The manufacturer of the super-phosphate claims for this manure (and the claims are well supported), that lands exhausted by long cultivation are made productive by its use, and that the effect of the phosphate will be evident in the improved crops for successive years; that it gives wheat a firmer stalk, so that it is not liable to lodge before ripening, produces a large head and plump berry, and in consequence of maturing earlier than customary the wheat is seldom affected by either the rust or the mildew, the yield being increased fully one-third; rye, barley or oats being equally benefitted. It gives a vigorous growth to corn and peas, and causes them to ripen ten days earlier than is customary. It quickens the growth of turnips so that they usually escape the insects, and increases the yield, as it also does with regard to carrots, beets and other root crops. It improves the quality of the fruit of grape vines, fruit trees; also of strawberries and other products of the garden; its effects on flowers and lawns surpasses any other fertilizer. Testimonials in favor of the super-phosphate have been lately received from Dr. Thos. Anderson, Professor of Chemistry in the University of Glasgow, and chemist to the Highland and Agricultural Society of Scotland; from Henry Croft, Professor of Chemistry in University College, Toronto, and Chemist to the Board of Agriculture of Upper Canada. This gentleman, in reporting an analysis he made of the super-phosphate in September, 1863, says:—"The manure—containing in the insoluble portion, phosphate and sulphate of lime—and in the soluble part so large a proportion of the salts of ammonia in such a form as to be readily assimi-

lated by the plants ;—must be a very valuable substitute for guano or other manure. The charcoal in it is also very valuable, and the oils present may be useful in driving away insects, independent of any action as a manure." The manufacturer has also received letters, speaking in high terms of the super-phosphate, from Colonel E. W. Thompson, President of the Board of Agriculture, Canada West; from Hugh Brodie, Esq., Montreal; from Thomas Briggs, jr., Kingston. C. W.; as well as from others. The experience of the past would seem to indicate that phosphates, if properly prepared, will eventually hold the first place in the farmers' estimation as concentrated manures, and in such an event the super-phosphate of lime manufactured by Mr. Coe, will doubtless come in for the lion's share of the patronage of the agricultural community.

MILLER'S PUBLISHING, STATIONERY, AND SCHOOL-BOOK WAREHOUSE,

60 ST. FRANCOIS XAVIER STREET, MONTREAL.

This well known and extensive concern, one of the many which have gradually advanced with the prosperity of our country, was established by Mr. Robert Miller in 1841. In 1844 he admitted his brother, Mr. Adam Miller, as a partner, and from that time it was continued under their joint management until the spring of the present year, when they separated, Mr. A. Miller taking the management of their Toronto branch, and Mr. R. Miller again assuming the entire control of the establishment here. On the first story of Mr. Miller's premises are the sale and order rooms, where samples of his various manufactures are kept on view. The business being principally wholesale, this flat contains a very large and well arranged assortment of samples of every description of stationery, account books, wall papers and window shades; these goods find their way all over the country. Here is also carried on an extensive trade in school books and school requisites. In

this branch of his business Mr. Miller possesses peculiar advantages, for in addition to a large stock of the various English, French and American school books now in use, he is the agent of the superior series published by our enterprising fellow-townsmen Mr. Lovell. The second flat is occupied as a store-room, and contains a large quantity of writing, wrapping and Manilla papers, stationery, &c., of his own manufacture and importation. The third and fourth stories are appropriated to the uses of a book-bindery and blank-book manufactory. All the modern appliances for assisting labor are here in use, and this department, we were informed, turns out a vast amount of work, and gives employment to a large number of hands, male and female. Judging from the facilities for conducting business manifested in every department of the establishment, we should say that Mr. Miller aims at the prompt execution of orders. His prices are moderate and his terms liberal.

WEST END DRUG STORE.

Mr. John Gardner, proprietor of the West End Drug Store, 295 Notre Dame Street, began business in an adjoining building, No. 293, in the year 1854; but finding that his trade increased out of proportion to the accommodation of the place in question, he removed to his present establishment in the year 1858. It may be said without risk of contradiction, that a handsomer window could not be found in the street in which his premises are situated. The window is of plate glass, and behind it are ranged objects calculated to attract the attention of the most careless observer. At night, when the gas is lighted, the effect produced by the combination of various colors in rear of the window, and by the internal view of the shop as seen through the plate glass door, is very beautiful. The shop is admirably fitted up; and one does not know which to admire most, the artistic taste displayed in the arrangement of shelves, glass cases and stands, or the variety of the articles which these contain. We will not attempt to describe the in-

terior of this store, further than to say that it is a model for establishments of the kind. Mr. Gardner's premises are well adapted to the requirements of the retail trade, which, by the way, is gradually growing into a wholesale country business. It is worthy of remark that Mr. Gardner devotes special attention to the dispensing of medicines, all prescriptions being made up under his own personal supervision. The general confidence reposed in him in this respect is a good guarantee for his attention to other branches of his business. Mr. Gardner imports all his medicines from the best houses in Great Britain and Paris; and is always on the alert to procure any new medicine which has been properly tested, and has received the commendation of the Faculty. Coal oil and burning fluid are staple articles of his business; for the storage of these he has built a coal oil safe, which is detached from the store, and is entirely fire-proof. The premises occupied by Mr. Gardner are of cut stone, and four stories in height. The cellar is used for the storage of olive, and rapeseed oils, alcohol, &c. The three flats above the shop contain three rooms each, and here are packed away all descriptions of stock. Since the fire that took place in the premises in the month of March last, Mr. Gardner has taken occasion to improve his shop which is now second to none in the retail trade; he has also enlarged it as well as the building, but even yet has failed to procure all the accommodation his business demands. Mr. Gardner has an experience of nearly 30 years in the profession of chemist and druggist; and those who patronize him will speedily discover and readily admit that this experience has been used to their advantage.

JOHN DOUGALL & CO., PRODUCE COMMISSION MERCHANTS.

This firm is among the most prominent engaged in the commission business in this city. Their premises are admirably adapted to the business transacted, being in a central location and possessing the important re-

quisite of ample accommodation. The business is divided into three separate branches, namely:—the dry goods, the leather, and the produce; each of these branches has its own distinct management, and each is carried on in separate parts of the premises. The dry goods branch was established as early as the year 1828, and has been steadily carried on since that time, to a greater or less extent; this business has developed itself considerably within the last two years, especially as regards domestic manufactures. The leather branch began to extend about 1860, and has steadily increased in magnitude since. The produce branch began to extend about 1856, and since that time its growth has been great and general. An idea of the extent of the business carried on, and the facilities possessed by this firm, may, perhaps, be best gathered from a few details concerning the size and capacity of their premises. They are situated on St. Paul Street, No. 270. They have a frontage of 80 and a depth of 120 feet, and extend from St. Paul to Commissioners Street, having a similar frontage on the latter. On entering from St. Paul Street the west side of the building is found to be appropriated to the leather, and the east side to the dry goods commission business. The basement, which corresponds to the dimensions of the entire premises, affords ample accommodation for the produce commission business. The private office of the firm is on the second flat, fronting St. Paul Street. The entrance for goods is from Commissioners Street; this entrance leads into a court yard, whence produce can speedily be transferred to the basement and cellars, and dry goods and leather hoisted to their appropriate flats. The facilities afforded by this yard for the speedy reception and transmission of goods are all that can be desired. With regard to the storage capacity of the premises, it may be well to notice that there are seven cellars, each connecting with the other and affording accommodation for three thousand kegs of butter and one thousand barrels of pork and lard. The stores are built round the court yard already spoken of, and are three stories in height, with separate

entrances from Commissioners Street. As before stated, each department has its own separate offices and staff of employes, the number of whom, employed in the commission business, is twenty-three. Mr. John Dougall was among the first in this city to engage in the produce commission business, and in this connection it may be interesting to mention that Mr. Dougall was probably the first consignee in this city of flour from the Western States, he having, through Messrs. J. & J. Dougall, of Windsor, C. W., received a consignment from Detroit, the then Chicago of to-day, about the year 1833. The business of this firm is now rapidly extending in all its branches, and from their long experience and extensive connections, they are enabled to give their consigners every advantage that our markets afford. Messrs. J. Dougall & Co. furnish the valuable market reports for the *Montreal Witness*.

JAMES HOLIDAY & BROTHERS.

We have noticed, in a previous number, the warehouses of Mr. James Holiday & Brother; but as they are also extensively engaged in the cooperage business, which has an intimate and important connection with the warehouses, we think it may not be considered out of place to present a few details with regard to a branch of manufacture they have brought to a high stage of development. The cooperage of Holiday & Brothers is situated No. 34 Anne Street, and covers about three quarters of an acre of ground. The works are extensive, and there is a large and increasing demand for the manufactures of the establishment. The yard of the cooperage contains a vast quantity of material, in the shape of hoops and staves. The greater part of the staves come from Western Canada, a portion also being received from Quebec; when they arrive they are piled up in sheds ranged round the yard, and here they remain until thoroughly seasoned; this process is so important that in order to make perfectly dry barrels the firm keep six months stock a-head of actual consumption. The staves are divided into two

classes, the first being those that are cut by a cylinder saw, the second being cut by a horizontal knife; the former are cut when the wood is in its natural state, hard, close in the grain and tenacious, while the latter are cut when the wood has been subjected to a steaming process, rendering it almost as soft as cheese. The immense number of staves and hoops in this yard, is a pretty fair indication of the amount of work turned out in the cooperage. The first thing done in the manufacture of a barrel, is to join the requisite quantity of staves together, and then to secure them with what is known technically as "truss hoops." The barrel, in this the primary stage, is put into a furnace, within which is placed a fire-cresset. The action of the heat expands the staves, and joins them so firmly and closely together, that the "truss hoops" may be taken off, and yet the staves will remain united. As soon as the barrel is removed from the furnace, it is headed, hooped, receives a few finishing touches, is properly tested and then is ready for the market. Nothing whatever is suffered to go to loss in the cooperage, everything being judiciously economised; for instance, the remains of defective hoops are cut into flour barrel linings by an ingenious machine made expressly for Mr. Holiday, and operated upon by a boy with great facility. There is an apparatus, the motive power of which is on the lever principle, called a jointing machine, and used to joint such staves as require that process. This machine is worked by the foot, and the stave being placed length-wise under the knife, the latter, at one stroke, performs its work, cutting the hard wood with the greatest ease and expedition. In the cooperage there are three double chimnies, in which cressets are placed for heating the barrels, and at first thought one might suppose that furnaces in such a place as a cooperage, are somewhat dangerous, on account of the proximity of such combustible material as chips and shavings. We are informed, however, that conflagrations in a cooper's shop are of rare occurrence, and this was explained by the fact, that during the progress of manufacture it is necessary to resort to the steeping of the

wood, the chips and shavings of which are in consequence rendered damp and not readily inflammable. There are capacious cellars beneath the workshop, where there is stored away an immense variety of coopers' work of the best descriptions—barrels, paint kegs, pails, stable buckets, iron-bound and strongly made in every part, and looking as if they would last for a quarter of a century. Mr. Holiday is the owner of another cooperage in Nazareth Street, in which he carries on the manufacture of iron-bound tight work, such as is in common use by distillers and grocers. In this cooperage he also makes grain measures, such as bushels, half-bushels, minots and half-minots; the material used in the manufacture of the foregoing articles is white oak of the best quality. There are seven workmen employed in this cooperage, and eighteen in the one in Anne Street. Mr. Holiday began business nearly a quarter of a century ago, in King Street, with his father, the late Mr. John Holiday, and ever since has devoted all his time and energies to the demands of his trade, which has prospered so well that next year he intends erecting a large brick factory on the site of his present one in Anne Street. An idea of the extent of his business may be formed from the fact that he turns out 50,000 flour barrels yearly; they are made for the following mills:—Messrs. Ira Gould & Sons, and Grant, Hall & Co. A large quantity of tight barrels for holding oil, and dry casks of various sizes, are made for Messrs. Lymans, Clare & Co.; the capacity of these casks ranges from one gallon up to sixty gallons; they are principally used for drugs and paints. Mr. Holiday makes a large quantity of work for the military stationed in the Province; it is chiefly of a strong and substantial description. In his warehouse he keeps fifteen men employed for the cooperage of flour, and to attend to the shipment and transhipment of produce committed to his care. The work turned out at the shops of Mr. Holiday is of a very superior kind; and this statement, which will be accepted by all who have dealings with him, is further borne out by the circumstances that at the late Exhibition held in

this city he obtained the first prize for the best assortment of work known technically as "iron-bound."

BISCUIT MANUFACTORY.

Mr. Clarke Fitts, St. Joseph Street, commenced business in 1827, having as his partner Mr. Putnam Sawyer, the firm going under the title of Fitts & Sawyer. In 1829 Mr. Sawyer retired from the business, which was carried on by Mr. Fitts himself, until 1834, when he gave his brother an interest in the concern. This arrangement lasted till 1850, when the partnership was dissolved. Again Mr. Fitts conducted the business by himself, till 1861, when Mr. W. A. Winfield and Mr. Geo. J. Fitts were taken into partnership, and the firm became constituted under its present title of C. Fitts & Co. Mr. Fitts has taken the first prize in every instance in which he displayed his products at our Provincial Exhibitions. He did not bring forward his manufactures at the first great exhibition in London; but at the one held in Paris, in 1855, he secured both a medal and diploma. The biscuit manufactory of Mr. Clarke Fitts has therefore been in operation for the last thirty-six years, during which lengthened period of time it has been under his own direct personal supervision. The biscuits made in this bakery are manufactured by hand, and every care is taken in order to ensure satisfaction and palatableness as articles of food. The flour used is the best that can be procured in the market. The operation of baking is something as follows:—the flour after being moistened with water is placed upon a table, and the dough is thoroughly kneaded by means of a heavy wooden roller made to pass repeatedly over it. After this process the dough is formed into balls, which next assume the form of thin cakes, and in this shape are dexterously placed in the oven, each cake being so arranged that the entire surface of the oven is completely covered. They remain thus exposed to the action of the heat for a brief period, and are removed by the same appliance used in putting them in—a long pole, oar-shaped at one extremity, and

capable of holding on the blade about a dozen of cakes. To see these cakes when placed in the oven, thin and unsubstantial as they appear, and then to witness them coming out plump, round, appetizing Boston crackers, creates in the mind of the spectator the momentary idea that what he saw put in and what he sees taken out, cannot be one and the same thing. The crackers after being baked—the bakery is situated in the basement—are removed to the shop, and for the time being are deposited in large bins; afterwards they are packed up in barrels and boxes ready for market. Mr. Fitts has another bakery at 61 College Street, where all kinds of biscuits are manufactured by machinery; in the establishment in St. Joseph Street they are all made by hand; both of these bakeries are kept in constant employment, and give occupation to quite a number of workmen. The bakery in St. Joseph Street is the largest, the other being merely an auxiliary. It may be interesting in this connection to remark, that Mr. Fitts, for the past thirty-six years, has been in the habit of preparing the Pasover bread for the festival observed by our citizens of the Jewish persuasion; this fact speaks well for the professional reputation of Mr. Fitts, as the bread in question has to be prepared with the utmost care, and of the very best and choicest ingredients. There is one thing noticeable about these bakeries, and that is the remarkable cleanliness and neatness everywhere to be observed in the premises, and in the manufacture of the crackers. The greatest care is taken to keep the flour, the dough, the oven, &c., perfectly free from extraneous substances, and to this as well as other causes may be traced the reputation which the products of Mr. Fitts' bakery have acquired throughout this city and the Province. It may be interesting to state here a fact which redounds much to the credit of Mr. Fitts, namely, that his employes have been in his service, some of them from the time, and others shortly after, he began business. One man has been with him 36 years, the foreman 28 years, another man 25 years, two men 20 years each, and one 15 years; the total number of years added together

makes 144. Mr. Fitts himself carries on his trade where he first commenced it, adapting, of course, his premises, from time to time, to the exigencies created by business.

S. G. PATTON & CO.'S COAL OIL AND LAMP STORE.

One of the most important businesses that have sprung into existence within the past few years is that in petroleum, coal oil, and the various species of substances manufactured therefrom. The oil trade has assumed great importance in Montreal, and much enterprise and capital are invested in it, whether the wholesale or retail transactions be regarded. The firm whose name heads this article is largely engaged in this business, carrying on an extensive trade, wholesale and retail, in Montreal and other parts of the Province. Their store No. 35 St. Francois Xavier Street, is in an excellent position, the premises being spacious and well adapted to their business, particularly the wholesale branch. The store possesses the advantage of a good front, giving ample scope for a prominent display of their stock-in-trade. The premises are 30 by 80 feet, and extend from St. Francois Xavier Street to the rear of the Exchange building, having a spacious cellar underneath. There is a large and valuable stock of burning oils on hand, besides an extensive and varied collection of oil lamps, graduating from the cheap and plain lamp at one dollar, to the overgrown, aristocratic oil-burner, whose beautiful marble base and elegant stem and bowl, with costly chimney and shade, proclaim its price as one far overstepping the tradesman's humble resources. The shelves are full of lamp chimnies, brilliant reflectors, hand lamps and so forth, and shades of artistic pattern and decoration suited to every taste. This firm, owing to its connections, extensive stock, and abundant means, is in a position to fill any orders from town or country, their facilities for the packing up of consignments of oil and lamps for transportation being among the best. Their trade

being extensive and at first hand, the firm of Patton & Co. is in a position to transact business on terms the most advantageous to their customers.

THE CANADA HOTEL.

This, one of the oldest establishments of the kind in Montreal, is in St. Gabriel Street. The building was originally the property and business premises of the Nor' West Company, and afterwards lapsed into the possession of Madame St. Julien, proprietress of the Donegana Hotel, who after some time disposed of it to Mr. S. Giraldi, who carried on therein the business of a hotel for the next nine years, the establishment being favorably known as the "Canada Hotel." On the first of May last Mr. Giraldi retired from the business, having sold out his interest to Mr. Theodore Saucier, the present enterprising proprietor of the establishment. The building is extensive, well laid out, and in every way a most suitable one for a first class hotel. It has a frontage of 100 feet, with a good proportionable depth. In addition to the main building, which comprises five spacious tenantable stories, there is an east and west wing, each about sixty feet in depth and three stories high. The entire establishment boasts of 100 rooms all fitted up in an elegant and comfortable manner. The dining room is a large, handsome apartment, with one end facing and lighted from St. Gabriel Street. It is capable of seating 200 guests without crowding or inconvenience. Since coming into possession of the "Canada Hotel," the present proprietor has, to a large extent, refitted and re-furnished the premises, which are now a more desirable residence than heretofore. The whole of the first flat is occupied as a dining room, offices, reading room, parlour and so forth, the sitting rooms, parlours, bed-rooms and bath rooms being in the upper stories and easily accessible. The building is heated by coal and wood stoves, and well lighted by gas. Guests are conveyed to and from the "Canada" by omnibuses belonging to the establishment.

DRUGS AND CHEMICALS.

It would be difficult to find a more select drug store than the one kept by Mr. J. A. Harte, No. 268 Notre Dame Street. An exterior view of the premises shows that they possess all the elements of attractiveness; and the window, always sure to arrest the attention of the spectator, indicates, by the manner in which some of the articles of his business are displayed; the neatness, order and tastefulness to be found in the interior of the premises. Every one is aware that the avocation of a druggist is one that requires various qualifications, prominent among which are carefulness and previous scientific preparation. Mr. Harte has both these advantages, together with long experience, and to these as well as to other subsidiary circumstances, may be attributed, perhaps, the rapid success which he has attained. His store, inside, is a model of judicious arrangement, a place for everything and everything in its place. The various articles requisite in any establishment of the kind, are all to be procured at Mr. Harte's drug store. Here there are drugs and chemicals of all descriptions; select perfumes; the most popular of the patent medicines; spices of every kind; coal oil of the best quality; burning fluid lamps, articles for the toilet, cosmetics, most favorably known as adjuncts to beauty; and in fact a host of other things indispensable in his business. The premises occupied by Mr. Harte are well adapted to the requirements of his trade; they are very commodious, and have lately undergone large alterations in the upper parts, to suit the increase of his business. Mr. Harte is agent for the celebrated St. Leon water, a mineral beverage of acknowledged excellence, and one that of late has risen rapidly in the estimation of the public, not only of this city but of the Province. It is not long ago since the importation of foreign mineral waters constituted one of the parts of a druggist's business; but this state of things has been altered considerably, and this is owing to the fact that we possess springs in Canada able to compete with the German spas, and that we have amongst

us men like Mr. Harte, who use every effort to bring our mineral springs under the notice of the community. A prominent feature in Mr. Harte's business is the sale of agricultural and horticultural seeds, of which he keeps on hand a variety of first rate quality. It would be well for those concerned in this matter to keep the above fact in mind, for it is very difficult sometimes to procure good seed, or to test their value until too late to remedy the evil. Altogether this is a store which the public may support, not only with perfect confidence, but also with profit.

AKIN & KIRKPATRICK.

This firm began business as produce commission merchants in 1861, possessing the advantage of having a practical knowledge of the trade. They acquired their experience in Britain, and while acting as managers to Mr. John Dougall, a capacity they fulfilled for some five years previous to 1861. They have succeeded in the space of two years in establishing a large and rapidly increasing business, a fact which speaks well for their energy and enterprise. Their connections extend to nearly every county and town in Upper Canada. The principle of restricting themselves to the produce commission business, and of giving to each transaction their personal supervision, has commended itself to the attention of consigners. As an evidence of the patronage they have received we are informed that in the article of butter alone, they have sold from the middle of August to the present time the large quantity of about 8000 packages. Their business in grain, flour, ashes, pork and general provisions is also extensive and on the increase. The firm occupy very capacious premises, situated on the corner of Commissioners and Port Streets, contiguous to the Royal Insurance Buildings. The premises are in the heart of one of the principal business localities in Montreal, an advantage which is highly important to the interests of consigners. The firm have an efficient staff of assistants for carrying out the va-

rious details of office and warehouse. When practicable sales are made from the place of landing. The small margin for profits on produce of late years, has rendered it imperative to keep charges at the lowest possible point, and Messrs. Akin & Kirkpatrick's success prove their efforts in this direction to have been appreciated.

CARPET WAREHOUSE.

Carpets, formerly regarded as luxuries, and found only in the palaces of the great, have, with the march of civilization, grown to be regarded as necessities in every household; and, probably, in no branch of industry has a greater amount of skill and taste been expended than in the productions of the carpet loom. Since the carpet trade was first made a specialty in this city, over a quarter of a century ago, Mr. James Baylis has been connected with it, and he has now two extensive establishments, one in this city, No. 74 Great St. James Street, and the other in Toronto, No. 3 King Street, East. His importations, for the two establishments, are probably in excess of those of any other house in the trade in Canada; their extent and his long experience enable him to command every advantage the European markets afford. Mr. Baylis imports direct from the manufacturers, and nearly all his goods are made to order. His warehouse in Great St. James Street, in this city, is of cut stone, three stories in height, and is one of the most attractive on the street. The *coup-d'œil* on entering is very fine—a depression of the rear part of the second flat displays the contents of that portion of the building, and from the large windows at the back additional light is afforded to the first flat. Here is to be seen a large and varied assortment of the commoner and ordinary grades of carpetings, including Hemp, Wool, Dutch, Union, Superfine, Victoria twill, Imperial and other kinds; also, Cocon, Chinese and Manilla mattings; together with a large assortment of floor oil cloths, door mats, stair rods, &c., &c. Down one side of the room are carpets wound upon rollers, which extend along the

walls and reach from floor to ceiling; by this arrangement each pattern can be examined with ease and expedition. There is also an ingenious contrivance for displaying patterns of floor oil cloths, without the necessity of opening the cumbersome rolls. This consists of a series of folding doors, on either side of which is displayed a separate specimen of oil cloth, and which are so arranged against the wall as to open and shut at will, folding over each other, and occupying, when closed, the space that would otherwise be required for each. This arrangement, besides economising space, enables the purchaser without loss of time to view the different styles and patterns, to make comparisons, and select to the best advantage. The cloths exhibited are of great variety, both in design and quality; they are of English and American manufacture, including the celebrated productions of Hare & Co., of Bristol, and are to be had of any shape and dimensions, the webs varying from 18 inches to 24 feet in width. Rolls of carpet are piled over each other in every available space round the room. Ascending the stairs the depressed portion of the second flat is reached. Here are kept stair carpets, stair linens, crumb cloths, hearth rugs; some of the finer descriptions of mats, &c., &c. Also, a large variety of curtain materials and trimmings, in which Mr. Baylis deals extensively. In cornices he has many beautiful designs on exhibition. In this department there is great taste displayed. We noticed a great variety of trimmings, all to exact match, being manufactured expressly to suit the various materials for curtains, amongst which are plain and embroidered Terry Reys, Reptarras, Arras and Laguerre Cloths, and some very beautiful qualities of Caprera and Pekin cloths, which we thought sufficient to please the most fastidious—although at the time of our visit Mr. Baylis informed us the assortment was much reduced by extensive sales. It is his intention to keep this department constantly replenished with the most saleable goods. In Muslin, Leno, Nottingham Lace and embroidered Swiss curtains, he exhibits a great variety. A few steps lead from this to the

front portion of the flat, which is a large and remarkably well lighted apartment, and where are kept the finer class of carpetings, including Tournays, Medallions, Velvets, Brussels, Tapestries, &c. Most of these are from the celebrated looms of Messrs. Jno. Crossley & Sons, Halifax, England, whose productions stand unrivalled for beauty of coloring and richness of design. We believe Mr. Baylis prides himself upon the extent, and choice description of goods in this department, and certainly it would appear impossible to excel most of the designs in chaste coloring and elegance of outline—description is impossible, the eye alone can appreciate. The Mosaic hearth-rugs, fire-screens, &c., from the same makers, are splendid specimens of artistic design and finish; they are, in fact, pictures, in which the loom competes with the brush and palette of the painter, and afford striking examples of the marvellous adaptability of machinery, under the inventive genius of man. Mr. Baylis' arrangements with Messrs. Jno. Crossley & Sons, and the other leading manufacturers of Europe, enable him to offer the latest novelties as soon as produced. The third flat is appropriated to the storage of the enormous rolls of oil-cloth, patterns of which are exhibited below; also, the surplus stock of carpets, matings, &c., not immediately wanted. The rear portion of this flat is partitioned off into rooms, where are employed a number of upholsterers and women engaged in making up carpets, curtains, &c. These being made up on the premises are more immediately under the supervision of the proprietor, which affords all possible guarantee for their execution with care and despatch. That such establishments are liberally and increasingly supported in our midst, affords pleasing proof of our substantial prosperity.

THE UNIVERSAL CLOTHES WRINGER.

Mr. E. I. Bancroft, of the City Express Office, Great St. James Street, is agent for Lower Canada, on behalf of the Universal Clothes Wringer, an invention of W.

H. Childs & Co., Hamilton, which promises to come into general use, if utility and efficiency can contribute to popularity. This is a Canadian invention, and is no mean addition to the labor-saving appliances of the age. The verdict of the public has pronounced this machine to be the best and only reliable wringer for sale in Canada, the most durable in make, and combining more strength of frame capacity for pressure and power of action than any of its rivals. It is the only wringer with the patent cog-wheel regulator, for turning both rolls together. The advantage of the cog-wheel is this—that without them the whole strain of forcing the cloth through the machine is thrown upon the lower roll, and the cloth is thus made to act in the place of cog-wheels to drive the upper roll, thus causing three times as much strain upon the lower roll as when the cog-wheels, with this patent regulator are used, besides saving the extra strain upon the cloth. It has been shown by experience that clothes wringers without cog-wheels cannot be depended upon. This machine is capable of being easily and firmly secured to tubs of any size or shape; is simple in construction, does not readily get out of repair, can be used by any washer-woman, can be worked by a child ten years old, and will save its cost every nine or twelve months in the economizing of clothes. This machine has given entire satisfaction to all who have used it; and from the hundreds who have purchased it in Canada, there is ample and impartial testimony as to its excellence. Amongst those who have stamped it with approval are such men as the Hon. Isaac Buchanan, M.P.P.; Rev. Dr. Ormiston; Hon. W. P. Howland, M.P.P.; Judge Richards, &c., &c. The press of this Province has spoken in favorable terms of this invention, and the London *Times*, of August 14, 1862, in noticing the articles in the American Court of the Exhibition, refers to it in terms of unqualified approval. The Universal Clothes Wringer is a desideratum in every laundry, and its merits only require to be sufficiently known to bring it into general demand.

D. REES & CO., CURERS OF PROVISIONS, INSPECTORS OF BEEF, PORK, &c.

The premises of D. Rees & Co., Nos. 28, 30 and 32 Grey Nun Street, deserve, from their extent, and the magnitude and importance of the business carried on within them, a few descriptive details. The trade in which Rees & Co. are engaged, was originated more than a quarter of a century ago, by Mr. Moore, who conducted it till 1846, when after a few changes it passed to Mr. Macdonald; but the latter gentleman dying in 1855, Mr. D. Rees, who assisted in the principal management for years before Mr. Macdonald's death, assumed entire control, and conducts the business personally at the present time, attending to all the details of curing provisions, inspecting beef, pork and butter, and selling on commission. The principal store is about 60 feet wide, and 125 feet in length, and here the office is situated. This store is built in a very substantial manner, and in every way adapted to the purposes for which it was erected. The second flat is appropriated to the storage of salt, of which it is necessary to keep constantly on hand some fifteen or twenty thousand bushels. The cellar below the store is used in winter for the packing of pork and the curing of hams and bacon; it also contains an apartment in which is carried on the process known as "dry curing." To the right of the store above mentioned is a capacious yard—one of the most indispensable requirements about the premises. The yard is planked throughout, contains excellent sheds, and affords every facility for the inspection of pork coming from the Western States in the spring of the year, as well as from different parts of Canada. On passing out of the principal store, a gateway leading from the street is observed on the left hand side, and at the extremity of this passage is the smoke house. On crossing the passage in question another store is entered; in this store the beef is inspected and cured. In connection with what has been said regarding beef, it may be stated that Mr. Rees has a slaughter house





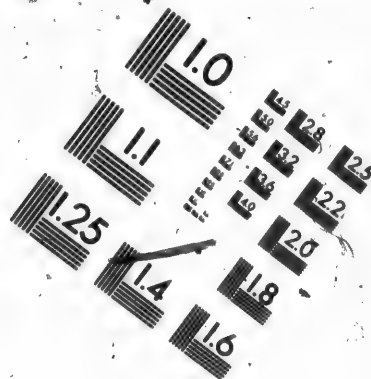
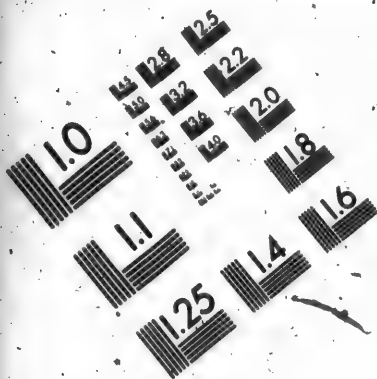
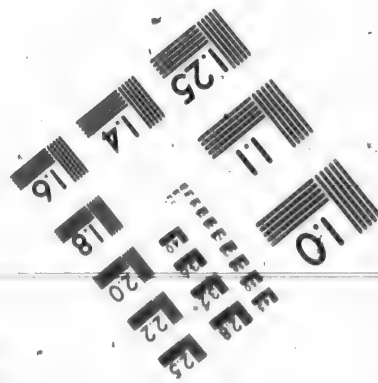
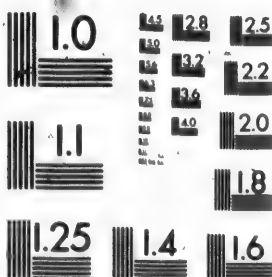


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in Seigneur Street, which covers about half an acre or ground. The "beef season" extends over the months of October and November, and during this period the slaughter house is a scene of constant activity—as a large number of cattle are killed daily. Mr. Rees has devoted considerable attention to the preparation of beef for market. In 1859 he introduced a change in the packing of beef for England, which change was for the benefit of the consumer. The alteration consists in the beef being sawn and cut into an equal number of pieces, thus affording better opportunity for packing and preservation. This system is now generally adopted, and beef sent to the English market in any other way would be almost certain to be refused. An idea of the extent of the business transacted by Mr. Rees may be formed when it is stated that about 30,000 barrels of beef and pork pass through his establishment annually, besides large quantities of butter: with regard to the latter article, it may be well to notice that he is the Government inspector of butter, having been appointed to that responsible post by the Board of Trade, acting under the authority of Act of Parliament. Mr. Rees gives employment to ten men the year round, and in the busy season affords occupation to over three times that number. There is one peculiarity about his stores that deserves especial mention, which is, that all property entrusted to his protection is amply covered by insurance. This system was lately introduced by Mr. Rees, and is one which must commend itself highly to consigners and to all who are acquainted with the nature of the business in which he is so successfully engaged.

JOHN F. HENRY & CO.

This enterprising firm first commenced business in the town of Waterbury, Vt., some fifteen years ago. The business was established by James M. Henry, father of the present senior member of the firm, who afterwards admitted his sons John F. and William into partnership. About two years ago Mr. Jas. M. Henry retired, and

William took a commission in the Federal army. Mr. Johnson, who had been for many years a traveller for the house, purchased the interest of Wm. Henry, and the business has since been conducted by Mr. John F. Henry and E. B. Johnson, under the name and style of John F. Henry & Co. They have some seven or eight teams constantly making trips through the eastern States, New York, New Jersey, a part of Pennsylvania, and both sections of Canada. These teams supply country merchants with goods on commission, or take their orders to be filled from the Montreal or Waterbury House. The Montreal branch was opened some five years ago, in comparatively small premises in St. Henry Street. But their increasing business necessitated more extensive accommodation, and they accordingly removed to the large and centrally located premises, No. 303 St. Paul Street, next door to Greene & Son's, and directly opposite Messrs. Geo. Hagar & Co. Their business is rapidly and steadily increasing. They keep constantly on hand a large and varied assortment of patent medicines and perfumery. They are agents for many of the principal medicines, such as Radway's Relief and Pills, Mrs. Winslow's Soothing Syrup, Hostetter's Bitters (for which they have just contracted to receive 100 dozen per month), and many others, the peculiar nomenclature of which we find it quite impossible to retain in our memory. They are also the proprietors of the celebrated Down's Elixir and Henry's Vermont Liniment. The sale of these medicines is very great and steadily increasing. Notwithstanding the prejudices that have existed against patent medicines, their use is rapidly and largely on the increase, and many of them are now prescribed and recommended by the leading physicians of the day. In country places where the services of a medical man are not always to be obtained, at least without great delay, the advantage of having a pill, a plaster, a balsam, a syrup, a pain-killer or a tonic ready prepared to hand, are very evident; while the fact that such can be procured at the trifling cost of from 25 cents to a dollar, is strongly in their favor.

BERRY'S SEWING MACHINES.

The proprietor of the first prize sewing machine depot, corner of Anderson and Lagauchetiere Streets, commenced business as an engineer in the year 1842. He was then chiefly employed in the construction of engines, water-wheels, mills, gearing, type-moulding machines, machinists' tools, lathes and screwing tackle, printing presses and their furniture, railway axles, hand-cars, &c. He erected the first power printing press in Canada, at Montreal, for the *Montreal Gazette*; he also was employed to fit up McLean & Wright's car factory, in Griffintown; he had temporary charge of the type foundry, while carrying on his own business; and had the direction of the engine shop at Longueuil, then belonging to the St. Lawrence and Atlantic Railroad Co. Mr. Berry engaged in the manufacture of sewing machines in the year 1853. In 1856 he obtained the first prize and diplomas for sewing machines at the Kingston Provincial Exhibition, and secured prizes at the Exhibitions held in this city in the years 1857, 1858 and 1860. He has gained prizes at every exhibition where his machines appeared; a fact which bears testimony to their merits, and which should be borne in mind by all who intend purchasing articles of this description. Mr. Berry is the inventor of the revolving tension regulator, a much needed improvement, for tightening the thread; for this improvement he received a prize at the Kingston Exhibition. In the United States it was appropriated and patented by manufacturers, who at once recognized its advantages, but failed to do Mr. Berry the justice of acknowledging publicly that he was the inventor. Mr. Berry has lately added another improvement to sewing machines, called an "anti-frictional loop stopper," whereby the loop is held back, without touching anything but the thread. This invention—for which he secured a patent in Canada in July last, and for which he has made application for patents in the United States and England—does away with the leather pad or brush used on the Wheeler & Wilson machines. The sewing

machines made by Mr. Berry are admirably adapted for either light or heavy sewing, such as shirt work, dress making, tailoring, shoe-binding and foxing, hemming and felling, and harness work; and are equally useful to private families as to manufacturers. Among some of their characteristics, his machines are noted for simplicity, durability, speed and economy of needles and thread. A commendable feature of these machines is, that they work without noise. Mr. Berry can refer intending purchasers to numerous private families and manufacturers in this city and throughout the Province. All his machines are of his own making, and he has no connection with any other manufacturer in Canada or elsewhere. Every purchaser is instructed gratis, and each machine is warranted. In a word, Mr. Berry has the facilities, as well as the requisite skill and experience, for the successful prosecution of his business, and guarantees entire satisfaction with every machine he sells. He constructed a machine, eight years ago, which has sewn, since that time, upwards of 1000 miles of binding, yet it is still as effective as ever. This fact proves that although the machines may cost a trifle more in the first place than those of other manufacturers, their excellence and reliability justify fully the slight additional outlay—an outlay which is only fractional.

TAILORS AND CLOTHIERS.

The establishment of Messrs. Galbraith & Brown, tailors, clothiers and general outfitters, Mechanics' Hall, Great St. James Street, is one of the best known among establishments of the same kind in this city. A really good suit of clothes, that is to say, the best cloth made up in the best fashion, is a desideratum which many pay well for, but do not always obtain. In the establishment of Galbraith & Brown there are to be found not only first rate material, but the best of workmanship, done by skilful journeymen in the first style. This firm pay particular attention to the changes of fashions, a most important point towards the

reputation they have achieved. They are constantly in receipt of all the latest Paris, London and New York fashions; they have had long experience in their business, and possess a perfect knowledge of all its details. This being the case, they are prepared to give their customers every satisfaction in style as well as in workmanship. Messrs. Galbraith & Brown devote particular attention to the making up of military and other uniforms. Every one is aware that nothing looks more awkward in the ranks at a review than an ill-fitting uniform. The material for a uniform is dear enough, and such being the case, some pains ought certainly to be taken to have it made up properly. This Messrs. Galbraith & Brown undertake to do, and from what they have already performed in this department of their business, and from the reputation of the firm, there is every guarantee for their giving perfect satisfaction.

STATIONERY.

Mr. C. G. Dagg, Stationer, 37 St. Francois Xavier Street, carries on the business first established by the late Mr. Hew Ramsay, some thirty years ago. Mr. Ramsay was succeeded by Mr. Thomas Campbell, who, in his turn was succeeded by Mr. Dagg, who began business about four years since, and has continued it up till the present time. He combines the functions of publisher with those of stationer, and issues from his own press the national series of school books, which number altogether some two dozen distinct volumes. Mr. Dagg imports stationery, which he disposes of by wholesale; and besides he deals in paper-bagging, of which he has a considerable variety. Every article required in the business of an office, is to be obtained at the store of Mr. Dagg—in fact the establishment contains all that can be comprised in the word stationery. The bookbindry is situated on the second flat, and is divided into two departments, one of which is a work-room for women, the other for men. The business of the women is to fold, gather and stitch the sheets as they come from

the press, into book form; after this they are handed to the workmen, who are engaged in the more arduous mechanical occupation of affixing the covers. The bookbindry of Mr. Dagg is kept busily engaged, as may be judged from the fact of his employing about twenty-five hands. As far as regards the work done, and the manner in which it is turned out, the establishment of Mr. Dagg would seem to sustain the reputation it acquired while under the management of his predecessors.

W. McCONNELL'S COAL OIL AND LAMP STORE.

Nothing is more indispensable to the convenience and enjoyment of the householder than cheap and abundant light. The artisan at his humble table, as well as the millionaire at his sumptuous board, groaning under a costly weight of plate and luxuries, rejoices to see his homestead well lit up, and to have at hand the means to enable him to wile away his evening pleasantly in the midst of the family circle. Nothing has done so much of late to render the home of the working man cheerful and comfortable as the discovery of rock oils, and the consequent enlarged manufacture of that now most popular article the oil-lamp, affording a ready and economical supply of light. As every body, therefore, burns oil to throw light on his domestic operations, the great desideratum is to know where oil and lamps can be procured to best advantage, having regard to good quality also. The store of Mr. Wm. McConnell, corner of Great St. James and St. Peter Streets, we at once present to the notice of the reader. This shop is one of the best business stands of the city, although the building is of unpretending appearance. Its enterprising proprietor must be well known as one who doth not hide his light under a bushel, the public who wend their way through the upper part of Bleury or Great St. James Streets having nightly the advantage of an illuminated path, thanks to the splendid lamp and large and brilliant reflector erected in front of the shop. Mr. McConnell has a select and

valuable stock of burning oils, oil lamps, and everything connected with this trade, on hand, and is therefore in a position to accommodate and satisfy every purchaser. His shelves are garnished with a beautiful collection of lamps. Here a large and choice variety of lamps may be seen—of many colors and dissimilar models, yet all of excellent design and capital illuminators. There is an extensive supply of chimnies, wicks, hand-lamps, &c., and several very pretty lamp chandeliers. Those who seek the means of cheap enlightenment at this store, will not return disappointed.

MICHIGAN, SOUTHERN AND NORTHERN INDIANA RAILROAD.

Office Great St. James Street, opposite the Post Office.

This road, favorably known to the travelling public, connects with the Grand Trunk Railway at Detroit junction, and forms a direct, comfortable and expeditious route to Chicago and all points west, south, and north-west. An agency for this line was established in Montreal some two years ago, by Mr. Samuel C. Hough, who has since been promoted to the post of general passenger agent in Chicago, and his place here filled by Mr. George Enearl, who was for seven years previous connected with the management of the telegraph department of the Grand Trunk Railway. Up to the time when the office was located in this city, the advantages of this road were very little known to the Canadian community. Since then, however, owing to judicious management, and the care evinced by the company in looking after the interests of passengers, the line has attracted not only public attention but public confidence and patronage. Besides the road from Detroit to Chicago direct, this Company has one from Toledo to a point forming a junction with the first at Elkhart, about midway, where trains stop for dinner, &c.; and still another from Detroit to Toledo, where close connections are made with all the roads from that place,

south, east and west. Passengers from Canada take their cars at Detroit or Detroit junction (if via G. T. R.) and run through without change, over a track that is unsurpassed on this Continent. There are several places of rising importance on this route, and the farming lands of Southern Michigan, Northern Ohio, Northern Indiana and Illinois, are among the best in the Western States. At Chicago intimate connections are made with all the roads leading west, south and north-west from that place. Every possible attention is given to ensure the comfort of passengers and the safety of their baggage, which is checked through to all principal available points. The passenger accommodation is all that could be desired; the cars are fitted up with all the modern improvements, and the conductors and other employes are civil, attentive and obliging. This line, taken as a whole, is one that deserves to be patronized. All whose business or pleasure leads them to visit the principal cities in the western, south or north-western states, would do well to call at the office here previous to their departure, where Mr. Enearl, the agent, is always to be found ready and anxious to answer enquiries and to furnish every information.

LIFE AND GUARANTEE ASSURANCE. THE EUROPEAN ASSURANCE SOCIETY.

The European Assurance Society, empowered by special acts of the Imperial and Canadian Parliaments for the assurance of lives, annuities, and the guarantee of fidelity in situations of trust, occupies the offices formerly in the possession of the Grand Trunk, Great St. James' Street. The subscribed capital of the Company is £300,000 stg., with power to increase to one million sterling; the annual revenue from premium is £150,000 stg., and the assets are over £500,000 stg. So much for the financial position of the Society, and now a word or two as respects its objects. These are very

important. The Society, in addition to the business usually transacted by Life Assurance Companies, is specially constituted to grant bonds of indemnity to bankers, merchants, public companies, municipal corporations, and others, against losses occasioned by the infidelity of their employees. As far as regards employers, the Society offers great advantages, inasmuch as it not only secures to them the prompt payment of any loss sustained, but affords the means of avoiding the comparative uncertainty attending on private suretyships. To employees the Society presents the advantage of enabling them to obviate the unpleasant necessity of resorting to their personal friends, for by the payment of a small annual premium, they can through it become their own independent sureties. To bondsmen, the Society affords, in approved cases, the means of immediate release from the liability under which they have placed themselves or their estates after them by the substitution of the Society's bonds for existing suretyships. This system of guarantee has been thoroughly tested by the mercantile communities in Great Britain and most of her Colonies, the various departments of the Imperial Government, in addition; being authorized by special act of the Imperial Parliament, to accept the bonds of this Society *only*.

The Life Department presents many advantages to assurers. For example:—All life policies issued upon the faithful representations of assurers, are indisputable. Policies, on which five full premiums have been paid, are purchased by the Society. On policies for over £200 *stg.*, for the whole of life, one half the premiums for first five years may remain unpaid at interest of five per cent. per annum; and three-fourths of the entire profits of the Society are divisible amongst the life policy holders on the profit scale of premiums. And last, but not least, all claims, life or guarantee, are paid without reference to London.

The combination of Life Assurance, with guarantee,

is a feature entirely new, and at the same time, remarkably advantageous. The scheme was introduced by this Society, and is transacted solely by them.

To the employee, who requires to give security, the opportunity is thus afforded him of insuring his Life, and thereby becoming his own surety *without any extra expense, beyond that which he would have to pay any other office for the Life Assurance alone.* For example, a person may require to give, upon entering a situation, a bond of security for £250, well—if he assure his life for £500—the bond of security will be granted *free*, and he will yet participate in the profits of the Society.

Thus, by the one payment for Life Assurance, he acquires three great objects:—1st, he secures himself the position he desires; 2nd, he secures his family a provision in case of his death; and, thirdly, he relieves himself of that most unpleasant relationship—a pecuniary obligation to his friends.

Or, again, it may appear in another light:—A person takes out a policy of Life Assurance for say £1000. He may at some future time require to give a bond of security for perhaps £500. He has not to look to his friends—the Society is ready to grant that bond *free of any expense whatever.* Perhaps, however, he may never require a bond of security for himself, but he may have a son or a brother who might wish for that obligation—then again is the utility of the Society manifested—he can transfer his right of security to either. In fact, the holder of a life policy in this Society has in his power the disposal of the Society's security to a proportionate amount—at any time—without any extra charge being imposed upon him. This is truly a branch in Life Assurance which cannot fail to tell its own tale.

In October, 1863, the Society established a branch in Canada—and such has been the appreciation of its principles that it has met with a success much beyond its expectations.

Most of the Banks, Railways and public companies in

Canada have already adopted its bonds in lieu of private security, and in addition the Provincial Parliament last session passed an act authorising the Society's Bonds to be accepted as security from officers in all departments under Government.

The Board of Directors in Canada are men of high standing and responsibility, as may be seen by a glance at the Society's prospectus.

COLONIAL LIFE ASSURANCE COMPANY.

The office of this Company is situated at No. 10 Great St. James Street. Among the many public buildings in the street in question, there are few, externally, which present a more attractive and elegant appearance; the front being of Cleveland stone, comprises on the ground two story semi-circular headed door-ways, with a large segment headed window between. The whole being of rusticated work, finished with a bold dental cornice. The second storey has a central ventilation window and two side windows, finished with segment heads, Corinthian columns, friezes and cornices. The third storey has a stone balcony in front of the venetian window, and the openings are finished with large moulded architraves, friezes, and cornices. The facade is finished with a bold cantilever cornice, supported by moulded and carved cantilevers with dentils between, and surmounted by a stone parapet finished with ornamental vases. On the top of the building the architect, Mr. Springle, has further displayed his skill in a beautiful cornice and a series of spear-shaped ornaments, which add to the effect produced by the front of the edifice. In the interior, the offices are so arranged as to present every facility for the transaction of the business of the Company.

The Company was established in Edinburgh in the year 1846, the capital amounting to no less than a million sterling. The object was to extend to the Colonies of Great Britain and to India the full benefits

of life assurance, and for the purpose of giving increased facilities to persons visiting or residing in foreign countries. The rates have been framed on the most correct observations as to the varying value of life; and profits of the Company are ascertained and divided at certain intervals.

The Colonial, by a strict attention to business, and by the liberal treatment it affords to those who assure with it, has succeeded in establishing itself amongst the best Assurance Companies at present in operation. It requires no lengthened notice to demonstrate the advantages of this office, for the public are already acquainted with them. Suffice it, then, to say, that the Colonial proffers every advantage that can be safely accorded to the assured.

The Directors of the Company in Canada are—The Hon. Justice McCord, Chairman; Benjamin H. Lemoine, Esq., Cashier of La Banque du Peuple; H. Starnes, Esq., Ontario Bank; A. Simpson, Esq.; R. S. Tylee, Esq., Merchant. Medical Adviser, George W. Campbell, M. D. Manager for Canada, W. M. Ramsay. Inspector of Agencies, Richard Bull.

THE ITALIAN WAREHOUSE, MONTREAL.

This is the name of an extensive establishment, lately opened in Great St. James Street, Montreal, by the well-known and enterprising grocer, Mr. Alexander McGibbon. As a business stand, the site of the Italian Warehouse possesses every advantage, being situated in the most fashionable as well as one of the most frequented streets in Montreal. This large Grocery occupies the lower range of the premises known as Printing House Buildings, and is directly opposite John Street. The exterior is very attractive, and the window is arranged in such a way as not only to gratify the eye, but also to excite the admiration of the spectator. All the more *recherche* articles in the scope of the grocers' business are here to

be seen displayed in their most effective manner, and it may be safely said, that a finer exhibition, in its own particular line, is not to be witnessed either in Montreal or, perhaps, in Canada. Having said so much about the exterior of the premises, we will now endeavor to give our readers an idea of the interior, adding such other details as may prove of interest. The length of the premises is 120 feet; the breadth, 30 feet. The basement, throughout its entire extent, is devoted to the storage of whole packages. In the other, or second basement, a vast stock of wines and ales are kept; and here, also, the wines are tapped and bottled. At the rear of this basement there is a large hoisting apparatus, for elevating the heavier goods from Fortification Lane; a street that runs at the back of the premises. A flight of stairs conducts from this basement (rear part) to the Shop itself, a brief description of which now becomes necessary. The Shop is fitted up in beautiful style. The counter is of walnut, with elaborately carved trusses. The shelving is of beautiful workmanship, with cornices richly carved and gilded; and between the panels, which are separated by pilasters, there is placed a series of handsome mirrors. A prominent place is set apart for cocoas, chocolates and bromas, and, independently of the excellence of those articles themselves, the manner of their arrangement would attract the observation of the visitor. We have noticed some tea canisters, "got up" in the highest style of ornamentation, and as models of design and finish, the most showy, perhaps, ever placed in a grocer's store in Canada.

On different other parts of the shelves there are ranged an infinite variety of articles selected from the best sources, and in thus procuring the several descriptions of goods, Mr. McGibbon's long experience, as his customers well know, stands him in good stead. On the counter there are sets of scales of the latest pattern, and mathematically exact: they were specially imported

from London by Mr. McGibbon. In the shop there is a large refrigerator for the protection of butter and other articles liable to be affected by the heat of the weather. At the rear is the office, but it is arranged in such a way as not to interrupt the fine view of the store as seen from one extremity to the other.

At some distance from the office, but in the same end of the premises, there is a coffee mill, driven by steam, and capable of grinding three pounds in the course of a minute.

After dark, when the store is lighted up by no fewer than twenty-one lamps, the whole building, seen from end to end, without anything to interrupt the view, presents as brilliant an effect as could be seen anywhere.

The Italian Warehouse, though designed for a first-class family retail business, is, nevertheless, well adapted for carrying on a large wholesale trade, a continuation of which Mr. McGibbon expects in his new establishment. Finding his business was extending westward, Mr. McGibbon found it absolutely necessary that he should open another establishment for the convenience of his western customers, and so far has had every proof that he was right in doing so. Although the principal part of his business is expected to be done at the old stand, Notre Dame Street, customers may count upon every advantage on calling at the Italian Warehouse, if they find it more convenient, as they will be attended by experienced salesmen from the older establishment.

WM. MIDDLETON & CO., WAREHOUSEMEN, &c.

Among the many firms engaged in this city in the warehouse and commission business, the firm of Middleton & Co. occupies a prominent position. Their business is not confined to one establishment alone; on the contrary, they use a number of premises, each possessing

a distinctive feature. The stores situated No. 139 Wellington Street, are directly opposite those of the Hon. John Young, and within a few steps of the Canal Basin. The situation is an excellent one in every respect, and affords the greatest facilities for the shipment and transhipment of goods. The buildings are of stone, and occupy a block. The front, as before stated, is on Wellington street; and there is one side on Colborne and another on Shannon streets; the depth of the whole is two hundred feet.

The stores were erected over a quarter of a century ago, and were designed more with a view to convenience and ample accommodation for goods, than to exhibit a showy appearance.

On entering the premises, passing first into the office, which is almost forty feet in length by twenty in breadth, one reaches the store, which is thirty feet wide and runs the entire length of the building. Leaving this store (which is entirely filled with flour) and entering the yard, an extensive platform gangway conducts to the second flat, which is of the same dimensions as the one below it. A large portion of this second flat is used for the purpose of a bonded warehouse. This storey is also well filled with flour, tobacco, etc. The gangway already mentioned plays a very important part, for it is so constructed that goods may be carted up to a level with the second storey, and there discharged. Goods may be also removed from the first to the second flat, and *vice versa*, without the tedious process of hoisting. In rear of these stores is a spacious yard, almost all of which is planked; running around the yard are extensive sheds, capable of accommodating a large quantity of goods. An idea of the size of these stores may be gathered from the fact that they can find room for no less than 25,000 barrels of flour. Another advantage possessed by these stores is this—that having entrances from Wellington, Colborne and Duke streets, they afford facilities for the reception and delivery of

goods, which constitute an important part in their favor, viz :— Expedition and despatch, with the greatest economy of labor.

About half an acre from the store in Wellington street, Middleton & Co. possess stores in Colborne street, directly opposite to the Canal Basin. The premises in question are pretty extensive, as may be readily imagined; when it is stated that they occupy a space amounting to about two acres. These premises are devoted to the stowage of heavy goods, such as coal, iron, tiles, etc. On the premises are several brick buildings, occupied as stores, offices, etc., one of them being the office of the government Flour Inspector.

Middleton & Co. also occupy a large store on Common street. It is built of stone, and runs from Dalhousie to Nazareth street. The situation is an excellent one, right in front of the Canal wharves, and the facilities for shipment and unshipment being unequalled. The stores are these formerly occupied by Gillespie, Moffatt & Co., and are admirably adopted for carrying on a large business. Flour, tobacco and salt are deposited in large quantities, and their capacities may be judged when we state that they can accommodate 10,000 barrels of flour, and 20,000 bushels of wheat. Underneath there is a very large cellar, capable of storing between 7,000 and 8,000 barrels of pork. The yard is planked throughout, and affords special facilities for inspecting, cooping and packing pork, a purpose to which it is devoted in connection with the storage.

An important feature in Middleton & Co.'s business, is the storage of coal oil. For this purpose they have at their disposal two extensive coal oil stores, situated on Grand Trunk street, and Knox's road, in the vicinity of Point St. Charles. A short description of the stores in question, which were erected specially for the storage of coal oil, may repay the attention of the reader. There is one store on the East and another on the West side of the Grand Trunk Railway.—The store on the East

side is a curiosity in its way. Externally it has the appearance of one of those heavy field works we read of so often now-a-days. It is covered with earth on the top and sides; and four doors on each side covered with iron, suggest the existence of a battery and immense port-holes. The store is divided into two sections by a fire-proof wall; the first section is devoted to the storage of coal oil, the second benzole. Both sections taken together are capable of containing between 5,000 and 6,000 barrels. The arrangements in the interior are so excellent, the ventilation so thorough, that Middleton & Co. can, and do, guarantee that each barrel coming to them in proper order, will leave their store without its contents being in any way diminished. In proof of this we may state that we were informed by a large wholesale dealer, who had a quantity of coal oil stored in Middleton & Co.'s stores in November last, and removed in June, that it was found to have suffered no loss whatever in the gauge.

The store on the west side of the railway track is some 280 feet long, by 75 feet wide. Like its fellow, it is walled in and roofed with earth, and is fire proof. It is capable of storing between 8,000 and 9,000 barrels, and a portion of it is occupied as a bonded oil warehouse. The cars of the Grand Trunk run right alongside this shed, and the firm take charge of all the oil, whether consigned to them or not,—carried by the Grand Trunk, and are responsible for its delivery to the consignees. The peculiar advantage connected with the situation of these sheds is this, that all expense for cartage is saved, and that the damage which follows the most careful loading and unloading where vehicles are concerned, is avoided. Every precaution is taken for the safety of the oil. No smoking is allowed, and a watchman keeps guard over the sheds by day and by night.

Mr. Wm. Middleton and Mr. A. J. Barnett commenced business in May, 1863, previous to which time they were engaged in the storage and commission trade. The

success which has attended their present business has obliged them to extend their premises from time to time until they have now ample consignments to occupy the very extensive premises we have been describing. Besides doing a commission and storage business, Messrs. Middleton & Co. are extensive dealers in coal, salt, &c., and are constantly in a position to buy or sell on the most advantageous terms. If persevering industry and enterprise is any guarantee of success, we may say that Messrs. Middleton & Co. certainly deserve a fair share.

HALLY & McWILLIAMS, CONFECTIONERS.

This establishment is situated at No. 300 St. Paul Street. The building is three stories in height, and is well adapted for the business carried on by Messrs. Hally & McWilliams. The first flat is used as a sale and show-room; and here there are always on exhibition samples of the various kinds of confectionary manufactured in other parts of the premises. Every description of sweetmeat that can tickle the palate or please the eye, is produced in this establishment. In the rear of the first flat there is a singular machine technically known as a "revolving confection pan." It is heated as well as turned by steam. The peculiar feature of this machine is to cover with sugar any article placed inside. For example: a quantity of almonds is thrown in, the sugar is added, and in a very short time the almonds are coated equally on all sides, and when they are taken out, present that smooth, snowy appearance with which our readers are familiar. The machine does its work far more effectively than the human hand, and saves the labour of three workmen. It is the only apparatus of the kind in the city.

The second flat is occupied by a number of girls, who are employed in packing up preserves, labelling, etc. On the same flat the manufacture of lozenges is carried on. The process is something as follows:—The

sugar (the purest that can be obtained) is first made into a dough. It is then rolled on an iron plate until it is reduced to the thickness required for the lozenge. Afterwards the mottoes—if the lozenges are meant for those known as "conversation" ones—are stamped upon the plastic material; then a young woman strikes out, by means of a die, lozenge after lozenge, and so dexterously is this done, that the mottoes are accurately preserved. The lozenges are then laid out on trays, and put away in order to be dried.

On the third flat, the manufacture of gum drops and the more common class of candies is carried on; and on the same storey is the drying-room, where gum drops, ju-jube paste, etc., is placed in racks and left to remain until fit to be packed up for market. There are twelve persons, in all, employed in this establishment; and a large amount of confectionary is manufactured daily. Hally & McWilliams began business about two years ago, as successors to Robert Shields. At first, only a portion of the premises was occupied, now the whole is scarcely found sufficient for the requirements of the trade. The firm deserve praise for the energy with which they have prosecuted this particular branch of local industry.

CABINET-MAKING WAREHOUSE.

MR. MCGARVEY.

The premises of Mr. McGarvey are situated at No. 205 St. Joseph Street—a thoroughfare which, by the way, would seem to be better entitled to the name of Notre Dame Street, West. As Mr. McGarvey is one of the prominent cabinet manufacturers of Montreal, it may not be considered out of place to lay before the reader, in a few lines, a sketch of the progress of his business. He commenced fourteen years ago in that part of St. Antoine Street known as the St. Antoine Bridge. After

remaining there for three years, he removed to premises located a few doors further on the same street, and carried on cabinet-making in connection with dealing in colours. Thence, as his trade increased, he removed opposite to those premises he now occupies. Finding, as time went on, that trade continued to roll in upon him in increased volume, he removed to Notre Dame Street, but the store—then one of the finest in the street—proving too small for his business, he was compelled to remove in November last to his present establishment.

The premises he now occupies are capacious enough to all external appearance, but an inspection of the interior would impress the visitor with a somewhat different idea; for although they are three stories in height, and although every available foot of space is economized, they are scarcely found sufficient for the purposes of Mr. McGarvey's trade. The store is 97 feet by 60, and is owned by Mr. McGarvey. The premises are divided in two by a brick wall, but communication is provided for by means of folding doors.

The first flat on the right hand side is used as a show-room. The furniture here on exhibition is of a beautiful description; and is remarkable alike for the taste of the workmanship and the excellence of the material employed. Although Mr. McGarvey sells furniture at the lowest possible prices, he turns out articles finished, in all respects, in a manner equal to the best in the city. He does a large trade in wood and cane-bottomed chairs, which seem to be in favor everywhere.

From the first flat to the third, the store, on the right hand side, is used for the purpose of displaying the goods manufactured. The second flat contains a great variety of chamber sets of the best description. There are some fine specimens of marble-top tables, and also of sofas, made in the best possible manner, highly finished, luxurious and attractive. The price of the chamber sets varies from the sum of \$18 to \$200; the sideboards may be found to vary in much the same pro-

portion. The third flat contains a very fine display of upholstery.

The first flat, on the left hand side, is used as a store and packing room; immediately behind is the workshop, which runs up to the third story of the building. The workmen employed consist of cabinet-makers, varnishers, upholsterers, carvers, etc. In the article of chairs, the business done by Mr. McGarvey is very extensive. A greater part of the chairs are made in L'Assomption, but are only roughly put together; however, as soon as they arrive at Mr. McGarvey's manufactory, they receive the finishing touches, and can vie with any made elsewhere, both as regards durability and workmanship. An idea of the business in this particular department of his trade may be gathered from the fact that Mr. McGarvey disposes of between 12,000 and 15,000 of these chairs during the course of the year.

The premises he now occupies not being extensive enough for his requirements, the proprietor intends, in Spring next, to open a new factory in Griffintown. In the store where Mr. McGarvey now conducts business, there is a spacious cellar, in which there is piled up a vast quantity of valuable material—such as veneer, mahogany, etc., etc. He disposes of a very considerable amount of veneers and mahogany to the trade. The cellar is well lighted up; and a large yard in the rear affords facilities for the removal of heavy material to the work-shops above.

Mr. McGarvey began business on a limited scale, but by energy, attention, and a thorough system of management, has placed himself among the foremost cabinet-makers in the city.

DAWSON BROTHERS, MONTREAL.

It is not too much to say that, among the booksellers and publishers of Canada, none have occupied a more prominent and honorable place for the last 17 years, than the Dawson firm of Montreal. In 1847 Mr. B. Dawson

commenced business in this city ; since then the house has kept pace with the city's progress and prosperity. From a local origin, the firm of Dawson has gradually advanced in business and importance, till it has obtained quite a Provincial reputation. The firm changed in 1858 to B. Dawson & Son ; and in July, 1861, a still further change was effected by the retirement of Mr. B. Dawson, and the admission into the partnership of two more of his sons, since which the style of the firm has been " Dawson Brothers," by whom the extensive business is now carried on. Their large establishment situated on what may be called the fashionable side of Great St. James Street, No. 23. To the inhabitants of Montreal the store is familiar. No one can pass it without having his attention arrested by the extensive window,—which might be called a kind of " free art gallery,"—and the number of persons seen daily admiring the fine paintings and engravings exposed for sale. The outer window is 15 feet long by 12 feet high, made up of only three panes of glass, each 5 feet long by 12 high. Between this and the inner window books, magazines and works of art are set off with great taste. The Messrs. Dawson occupy nearly the entire building extending from Great St. James Street to Fortification Lane. The premises are 32 feet wide by 102 deep. Entering the store from St. James Street, we find ourselves in an elegant, well-lighted and admirably arranged apartment, fitted up with four long walnut counters, with passages all round, book shelves against the walls, numerous drawers and cupboards being constructed at their base. The attractive counters and show-boards are covered with the costliest books and choicest literary publications, to which may be added the other novelties and requisites of the trade. Wondering at the endless variety of the volumes exhibited, and admiring the multifarious tastes displayed in their binding and finish, we pass towards the rear of the shop. Mounting two steps, we are in the retail stationery de-

partment, where stocks of stationery and childrens' books of all kinds challenge notice. Bibles, prayer-books, medical works, etc., are here laid out on shelves, in these various departments, along the wall and on the counters in the centre of the apartment. In the extreme end of the shop is an apartment specially devoted to reserve stock; and here, we may add, is a depot of the Society for the Promotion of Christian Knowledge. Ascending here by a flight of stairs, we reach the picture gallery, which is in the second story. It is a handsome, well-designed apartment, 33 feet long by 19 feet wide; lighted from above, and with walls stained of that peculiar shade of olive-green adopted by the South Kensington Commissioners for their gallery. The carpet of dark green harmonises well with the general appearance of the room. Against the sober background formed by the walls, arranged in the best positions for effect, may be seen a good collection of prints, chromo lithographs and oil paintings, exposed for sale. This gallery may be said to form a nucleus for Canadian art, as some of the best works got up in the Province find their way here from time to time—in truth it is a fine arts repository, and as such most valuable in the advantages offered the artist desiring to dispose of his productions. The gallery, being open all day, is visited by the lovers of art of our city and elsewhere. The Messrs. Dawson, however, appear to make the trade in engravings a speciality, and at all times a very large stock of the finest London and Continental prints is on hand for disposal. Ascending to the third story, we enter a number of neat, well-ordered apartments. In one are stored memorandum books, photographic albums, portfolios, foreign papers, including the thin descriptions, and mounted maps. In a second room is a large and excellent stock of Gillot's steel pens and lead pencils; the latter the "Faber" manufacture. Descending to the basement, beneath the store there is much to attract attention. In addition to the immense stock of sta-

tioners' and booksellers' goods noticed elsewhere, we are apprised by the extensive display of paper of all kinds and sizes that we have reached the wholesale stationery department. Besides reams of paper, there are piles of blank books, etc., etc. In another compartment is found a fine display of folio papers, drawing papers, mounting boards, and so forth. In one part of the extensive underground premises is a large stock of cheap publications, a reserved stock of school-books; also a reserved stock of "Nichols' Standard Divines," the "Geology of Canada," etc., etc. The cellar is massive built and frost-proof. Here is stored the reserve stock of ink. In one compartment are the hot air furnaces, which dispense warmth to the whole establishment above. Adjoining this apartment is the bonding warehouse. In rear of the bonded warehouse, and contiguous to the basement, is a store-room for packing cases, and for the packing, receiving and delivering of goods. A considerable assortment of the heavy articles of the trade are here stored, including wrapping papers and slates. Goods are entered from the rear, in Fortification Lane, and can be hoisted from the basement or cellar to any part of the extensive premises. Spacious and well furnished as are the premises in the upper flats, those in the lower appear equally extensive.

The Messrs. Dawson publish the "Canadian Naturalist and Geologist," bi-monthly, and now in the ninth year of issue; the "Canadian Medical Journal," a monthly. From their establishment also issued "Archæia," of which Principal Dawson, McGill College, is the author. This firm has also the issuing of the publications of the Geological Survey of Canada, the chief of which is the Report of Progress from the Commencement to 1863; illustrated by 498 wood-cuts; one volume, large octavo, pp. 1011; price \$5. This magnificent work has been laid before Parliament, has received the commendations of our legislators, the press, and the educated public. It is thus spoken of by the *London Saturday Review*:—

"The style in which the work has been got up, the precision of the drawing and the accuracy of the wood-cuts may almost challenge comparison with the execution of similar productions on this side of the Atlantic."

The following works are also from the house of Messrs. Dawson :—

Figures and Descriptions of Canadian Organic Remains ; large 8vo. Four Decades. Each Decade contains ten full page lithographs, executed in the very best style, besides many wood-cuts. Each page of lithograph has from 12 to 20 separate figures. Each decade is complete in itself.

The Air-Breathers of the Coal Period ; a descriptive account of the remains of Land Animals found in the Coal Formation of Nova Scotia, with remarks on their bearing on Theories of the Formation of Coal and of the Origin of Species.

Acadian Geology ; an account of the Geological Structure and Mineral Resources of Nova Scotia and portions of the neighboring Provinces, 12mo, pp. 458 ; with a supplementary chapter, illustrated by many wood-engravings, and a colored Geological Map.

The Messrs. Dawson, besides keeping on hand a good stock of standard text-books, works on science and every subject, obtain all new publications of merit as soon as issued from the English, American and French presses. They also supply all the literary and scientific reviews published on this or the European Continent.

The Messrs. Dawson have also published two chromo-lithographs, printed by Day & Son of London, of Canadian river scenery ; an Autumn crossing the St. Maurice, and a Winter crossing the St. Lawrence at Quebec, after paintings by Chas. J. Way, a young and most promising artist, for a long time resident in Canada. Canadian scenery is thus, for the first time, represented in these chromos in the same attractive style in which the paintings of Turner, Rowbotham, Harding and other leading English artists have been reproduced.

PIANOFORTES—GOULD & HILL.

In the lower part of the building in Great St. James Street, known as Nordheimer's Hall, Messrs Gould & Hill carry on the Pianoforte and Music business formerly conducted by Messrs A. & S. Nordheimer. Before the latter gentlemen were known in Montreal, Mr. Hill was engaged as agent for the celebrated Jonas Chickering. Afterwards Messrs. Nordheimer secured the services of Mr. Hill as general manager to the business; and when, in March last, they retired, the business, good-will, and best wishes of the old firm passed into the hands of the present proprietors, Messrs Gould & Hill.

The premises, which were constructed solely for the Pianoforte and Music business by the Messrs. Nordheimer, are elegant, spacious, and attractive, and surpass in every respect any warerooms in Montreal, or Canada, devoted to the same purpose. The front part is occupied as the saleroom for a large and comprehensive catalogue of sheet and book music, comprising the chief publications of the best houses in Europe and America; the rear for the warerooms and exhibition of New York and Boston Pianofortes, and Cabinet Organs. Messrs. Gould & Hill's stock represents the three most celebrated Pianoforte makers on this Continent, Steinway,—Chickering, and Dunham—and they do not hesitate to claim for the instruments they offer for sale a superiority to those of any other Establishment in Lower Canada.

In doing this they but echo the sentiments and opinions of the musical community and profession, both at home and abroad. It seems almost superfluous to call attention to the merits of makers like Steinway and Chickering, whose reputations are so long established and so universally known and admitted. In order, however, to show how foreign as well as American critics regard these productions of art and science, we adduce a few of the many opinions expressed by the most competent judges in the musical world.

Says the *London Illustrated News of the World* (speak-

ing of the Steinway Pianos which were sent to the International Exhibition at London in 1862, and which gained for the Messrs Steinway & Sons the First Prize Medal, against the competition of 269 Pianos from all parts of the world):—"These magnificent pianos are without doubt the musical gems of the Exhibition of 1862. They possess a tone the most bell-like we have ever heard, and combine the qualities of brilliancy and great power, without the slightest approach to harshness."

Mr Henry Hoche, one of the most competent critics in France, says in the *Presse Musicale* of Paris:—"The firm of Steinway & Sons of New York exhibits grand and square pianos, both of which have particularly attracted the attention of the jury on account of their excellence. I have been able to judge upon their new method of *overstringing*, and can tell you that the square piano of Messrs Steinway & Sons fully possess the tone of a grand piano. It sounds *marvellously*,—the ample sound, the extension, the even tone, the sweetness, the power are combined in this piano, as in no other piano, I have seen."

The London Correspondent of the *Paris Constitutional* writes in connection with the International Exhibition:—"The palm of the piano manufacture does not belong this year to a European, but to an American house, almost unknown before this in Europe, Messrs. Steinway & Sons, who have sent five square pianos, which unite all the conditions of sonority and evenness of tone, to be found in the Grand Piano."

The *Vienna Press*, the highest authority in musical matters, referring to the pianofortes of the Exhibition, says:—"Steinway's Pianos, both grand and square, stand in the *first rank* of the pianos which have excited the most attention. These instruments win by their full, round tone, and also interest by their ingenious mechanical invention. The bass strings in them are *overstrung*, and of all the numerous improvements to be found in the Exhibition, Steinway's method seems to us to have the greatest capacity of developement, the most of the future

in it. It is, therefore, not at all surprising that their factory has become the greatest pianoforte establishment of the kind in America."

Nor does the house of Chickering & Sons lack for testimonials of an equally high order, given after the most careful and scrutinizing examination of the instruments manufactured by them.

The beauty and elegance of the cases, the light, free and airy appearance of the iron frame and other parts of the interior arrangements of Chickering and Son's Pianos, naturally prepare one for the clear, sweet, singing tone, so well remembered by all who have ever heard these instruments. Said Thalberg, one of the greatest living pianists:—"The instruments are the best I have ever seen in the United States, and will compare favourably with any I have ever known." At another time he writes:—"I consider the Chickering & Sons' pianos far beyond comparison the best I have ever seen in America." Gustav Satter, also, another eminent pianist, writes:—"For *volume and pure quality of tone, with nicety of articulation*, your pianos are *unequaled*."

L. M. Gottschalk, the celebrated pianist and composer, expresses himself thus heartily and artistically on the merits of these instruments:—

"The problem which, for more than half a century, the great European manufacturers have been proposing to themselves, may be reduced to this:—"How to obtain the greatest possible volume of tone without altering its charms, and at the same time to preserve its clearness and homogeneity through all the extent of the key-board."

"These different qualities seem to exclude each other. For instance, one instrument charming in a parlor would become thin and powerless in a large concert hall; another only owed its force to the acuteness of its tone, or to a confused vibration produced by too great length of string. You alone, Messrs CHICKERING & SONS, have succeeded, as I fully believe, in combining the different elements which have so long been sought after, in a

manner which will henceforth make our modern piano, the most complete of instruments.

"Harmonious roundness of tone, force in the base notes, limpidity to the upper notes, equality throughout all the registers, *singing quality* in the middle tones, and, above all, an astonishing prolongation of sound, without its becoming confused, were signs of an artistic progress which I at once discerned on playing the new instruments for the first time. Soon after, when I had been obliged to transport your piano several hundred miles by railroad, and play upon them without the time to have them retuned, I was still more surprised at the *rare solidity* of their construction by finding them in as perfect tune as when they started. Further-more, when giving concerts unassisted, and playing fifteen or eighteen pieces in succession, I have been capable of appreciating, by the comparatively trifling fatigue which I experienced, the precision and promptness of action which characterize your instruments."

It would be an easy matter to multiply testimonials to the great beauty and charm of the Chickering Piano; but we have quoted enough already, and *from the very highest sources*, to show that whoever possesses a Steinway or Chickering instrument has something to value as well as to afford them satisfaction.

So much space has been devoted to the Steinway and Chickering Pianos, that we can only say of Dunham that, next to the two unrivalled New York and Boston firms, his instruments rank higher, both at home and abroad, than those of any other American maker. The business of Dunham was established even prior to that of Chickering, and has worked its way up to an enviable position, while thousands of others have risen and fallen again into their original obscurity.

We have now only to say, that with the reputation these three makers possess, and the importance it is to them to retain it, a purchaser of one of their instruments has every guarantee that could possibly be desired.

Messrs Gould & Hill, in addition to a splendid assortment of these famous pianos, keep constantly on hand a large supply of cheaper and less widely known instruments, mostly for purposes of hire, and which will enable those who desire a piano for a short time, only, to gratify their wishes, at an exceedingly moderate cost.

They are also agents for *Mason & Hamlin's Cabinet Organs*, which are now becoming so universally used throughout Canada and the United States. These organs are designed to take the place of the melodeon with those who do not care to go to the expense of a piano, and are consequently made in an improved manner, and with a variety of resources altogether unknown to the latter instrument. The tone is fuller, richer, and more organ-like, while the case is handsome and attractive, and an ornament to any drawing-room. The larger sized ones,—intended for Church use, or for organ music of a more advanced kind than the Psalmody of the Home Circle,—are manufactured with from six to twelve stops and pedals, and range in price from \$200 to \$500. A more beautiful accompaniment to the voice than these organs it is difficult to imagine.

Messrs. Gould & Hill design to give their customers the full advantage of the present difference of exchange between Canada and the United States, and will sell all their instruments at the manufacturers' prices, with the simple addition of freight and duty. These truly liberal terms will enable parties desirous of purchasing, to procure a piano for fully one third less than former prices, a consideration which ought and no doubt will receive the attention of intending purchasers.

WINES, SPIRITS AND SEGARS.

Bacon, Clarke & Co.—The premises of this firm (long and favourably known as Peter Clarke & Co.,) are situate in St. Peter Street, opposite the end of St. Sacramento Street, which is the centre of the wholesale market. The building—containing offices, warehouse,

vaults, &c.—is of cut stone, four stories high, large and well laid out, being thoroughly adapted, both as regards position and construction, to the carrying on of a large wholesale trade.

The business of Bacon, Clark & Co., was begun in 1858, since which time it has steadily, and we might add, rapidly increased, being at present considered one of the first houses in Canada, in the wholesale wine and spirit trade, a result alike creditable to the business enterprise of the firm and the discernment of the trading community.

It is unnecessary to inform our city readers that they cannot procure purer or richer wine or better spirits at any other house, for to them the fact is patent, but to such of those living in the country, who only know the firm by name, we would take the liberty of saying that its members are practically acquainted with the business, purchase their goods direct from the planters and manufacturers, thus saving all intermediate profits, and this coupled with a large business career, is the best guarantee which any house seeking public confidence can offer.

STEAM SOAP, CANDLE & OIL MANUFACTORY.

The premises of Messrs. J. Mathewson & Son, situated on Inspector, College and William Streets, are very extensive, and present every facility for carrying on a large business in the manufacture of soaps, candles and oils. A visit to the establishment is one that amply repays curiosity, and, at the same time, conveys a considerable amount of useful information. On passing through the office, which is vaulted and fire-proof, the yard is entered; and then four buildings present themselves to view. The buildings are used and arranged as follows:—No. 1, as the Oil Factory; No. 2, the Soap House; No. 3, Boiler House; No. 4, Store. In building No. 1, there are two large tanks for refining oil. The process of preparing oil from lard, and converting the latter into material for stearine and adamantine candles, is a very interesting

one. First of all, the lard is clarified, by steam, then kept for a few days in order to allow it time to granulate. After this it is brought up to the press-room, the presses being fixed in close proximity to a long and deep iron trough. The lard is then wrapped up in a cloth which is folded square. A number of these cloths, with a plate of sheet iron between each, are placed within the press, until it is filled. The machine is then screwed slowly down, and the oil being forced out, into the trough already mentioned, is thence pumped into the refinery. These presses are called cold presses, their use being the production of oil. In a small room contiguous to this one, is a press called a hot press, the business of which is the preparation of stearine for the manufacture of candles. After the lard has left the cold press, it is brought to the hot one, which is situated in an apartment heated to a very high temperature. This press works the same as the others, and the lard is put in just in the same way. When every thing is in readiness, the press which has a power of no less than 500 tons, is, by means of a series of cog-wheels, lowered gradually down, and the immense weight presses every drop of oil out of the lard, and converts the latter into a hard white semi-transparent substance, which is used in making stearine and adamantine candles. In a third room upon this same flat, there are four oil cisterns, where the lard when not intended to be used as stearine, is manufactured in oil; the process is carried on by means of steam. There is also in this room an ingenious contrivance for speedily emptying of their contents, barrels filled with such tenacious substances as palm-oil. The cask, with the head off, is placed beside a shallow trough on the floor, and a steam pipe conducted to the contents, the steam is then turned on, and in five minutes it is empty, the contents having disappeared through the trough above mentioned, and been conducted to a reservoir in a lower story. There are also in this room two very large steam boilers, used in making soap, of which more anon. In connection with the oil house, it may be well to mention that in the cooperage room, which is at the bottom of

this building, there is an apparatus, the only one in the country, for the measurement of oil. The machine consists of a cylinder, which, as well as a glass tube, that runs up the outside, thermometer fashion, is hermetically sealed at the top. The oil to be measured descends from the refinery above, and as it fills the cylinder, the glass tube indicates to a fractional degree the amount of fluid that has entered. The building known as No. 2, is used as a soap house. The leach house is situated on the first floor, where lye, used in the manufacture of soap, is prepared. This lye is made by infusing warm water with soda ash; and the lye descends into reservoirs below the floors, whence it is pumped up into the soap pans in the second story whenever required. The soap kettles are situated on the second story, and are very large and capacious; one of them being no less than 14 feet in depth, 12 feet wide across the top, and capable of turning out at one boiling no fewer than 517 boxes, each box weighing 64 pounds. There are six vats on this story, all of them being boiled by steam. Close to this room is soap-loft No. 1. This is a very extensive apartment, being 80 feet in length, by 70 in breadth. When the soap has been boiled long enough—a process which occupies sometimes several days, at other times a week,—it is brought in a liquid state in buckets to this loft. A number of frames, which, on the inside, are lined with zinc, and are put together in pieces, having been previously erected, the soap is emptied in until they are filled. The length of a bar of soap is the exact breadth of one of these frames. When cooled and properly solidified, the frame is removed, and the soap, after being cut into proper thickness by means of wires, is boxed and stored away ready for market. There is again a soap loft, known as No. 2, and of the same size as No. 1; this room is applied to the same purposes as the other, but is used for the better kind of soap. On the same story with the two lofts, is what is called the chemical-room, where the various preparations used in the business are kept in readiness. And in the immediate vicinity of this room there is a hoisting machine, which by ingenious mechanism lifts and lowers weights

of any heaviness, such as boxes of soap, barrels of ashes, etc. On the first floor of the building, No. 4, is the candle manufactory, a very important branch of Messrs. Mathewson's business. When entering, the eye is first attracted by a large boiler on the left containing the melted tallow; this boiler holds about two thousand gallons. The tallow is kept melted by means of steam. There are twenty-eight candle machines in this shop; these machines are placed on two large moveable circular platforms. Directly under the floor there is an ice-house, used for the purpose of cooling the candles, which purpose is effected in the following manner: After the tallow has been poured into the moulds, the circular platform is moved in such a position that on a number of trap-doors in the floor being opened, the cold air from the ice-house rushes up from below, and passing through the interstices in the candle machines cools the tallow gradually and surely. These machines are unequalled for the rapidity and effectiveness with which they perform their work; and everything about them betokens the progress of modern improvement in labour-saving inventions, for with these machines at his command, one man can now do the work of fourteen or fifteen. Below this same building, No. 4, are three fire-proof vaults, leading into College Street. Under these vaults are cellars for storage. The boiler house, forge, etc., occupy building No. 3. As has been stated already, the boiling of soap, and the melting of tallow, is done by means of steam. The steam is conveyed by pipes from the boiler to the soap pans; some of these have double bottoms, others have pipes at the bottom arranged in the form of the worm of a still; in both ways the steam effects its object almost instantaneously. Messrs. Mathewson & Son have obtained nine diplomas from Provincial exhibitions for the excellence of their manufactures; and in 1851 they secured a medal at the World's Fair in London. It only remains to say, in conclusion, that the facilities possessed in the shape of mechanical aids and skilful workmen, are unsurpassed any where in British North America.

PRINTERS, BOOKSELLERS, PUBLISHERS, BINDERS, ETC.

MIDDLETON & DAWSON, QUEBEC.

The premises of Middleton & Dawson are situated at the foot of Mountain Street, Quebec. The two gentlemen who compose the firm may be regarded as the direct successors in the first printing and English bookselling business established in Canada. They own, edit, and publish the *Quebec Gazette*, so long under the management of the late Hon. John Neilson, a name well known in the political annals of the Province. These gentlemen also carry on the stationery and bookselling business, which was suspended from the demise of Hon. Mr. Neilson, from whose legatees Mr Middleton (who had been in his service nearly a quarter of a century), purchased the *Gazette*, now approaching the completion of its hundredth year. Mr. Dawson is a son of Mr. B. Dawson, leading bookseller of this city. The firm have found it necessary of late, in order to meet the requirements of their fast increasing business, to enlarge their premises, and their store is now stocked with a large assortment of the best goods imported by themselves. The printing offices and bindery are supplied with the most approved plant and machinery, by which they are enabled to execute all orders in the most thorough and workmanlike manner, and with all desirable despatch. On the whole, speaking from personal knowledge, we may add, that a more compact and well-ordered establishment, on a moderate scale, it would be difficult to find in Canada.

The *Quebec Gazette*, the oldest paper in the Province, the *Montreal Gazette* coming next on the list, was first published on the 21st of June, 1764, just five years after Wolfe's landing. The paper was issued weekly, each alternate column being in English and French. The

Gazette was published by Messrs Brown and Gilmour, who brought their type and presses from Philadelphia. The paper flourished, in every respect, and in 1790 became the property of Mr Samuel Neilson, who also performed the duties of editor, and was successor to his uncle, Mr. W. Brown, one of the founders of the *Gazette*. This gentleman died in 1793, and Mr. John Neilson, his brother, being then a minor, the publication of the paper was conducted by the late Rev. Dr. Sparks, his Guardian, until 1796, when Mr. Neilson having attained his majority assumed control. The journal, under his management, continued to prosper and to exercise a strong influence on public measures of every kind. In 1848, Hon. Mr. Neilson died, and, as has been stated above, the *Gazette* passed into the hands of Mr. Middleton, one of the present proprietors. The *Quebec Gazette* of 1764, has a very different appearance from the *Gazette* of to-day. But in the space that intervenes, how mighty are the changes that have taken place not alone over the broad earth, but in Canada, then regarded as a "few acres of snow," now looked upon as a great and growing sovereignty. The *Gazette* has been the chronicler of every phase of progress, social and political, through which the country has passed. As the pioneer in Canadian journalism, the *Gazette* has done its part worthily and well, and after the lapse of a century displays that vitality which is the token of a long career of prosperity and usefulness.

RUSSELL'S HOTEL—ST. LOUIS HOTEL, QUEBEC.

All those who have had occasion to visit the ancient capital, either for the purpose of business or of pleasure, will call to mind pleasing recollections of the good cheer which has always been the characteristic of Russell's Hotel, Quebec. This establishment, which is situated

in Palace Street, and conducted by Mr. W. Russell & Son, proprietors, is a Hotel where the traveller or the tourist may certainly effect one thing—namely, to find, for the time being, the comforts experienced at home. The Hotel is conducted on an admirable system, and the arrangements are all that could be desired. The rooms are spacious, comfortable, well ventilated, this last being a very important requisite. The furniture is of the best description. As the measures taken to provide for the requirements of that very urgent personage, the "Inner Man," nothing could be better. The kitchen—as every guest who has been in this Hotel can bear witness—is always furnished with everything a connoisseur could require. The wines and liqueurs are of the best quality; in fact, all the adjuncts of a first-rate dinner table will be always found at hand. The attendance, too, is numerous, and the waiters perfectly acquainted with their duties. Mr. Russell & Son spare neither exertion nor expense to make their guests as comfortable as possible. The St. Louis Hotel, (formerly the Clarendon,) in St. Lewis Street, Upper Town, of which Mr. Russell & Son are also the proprietors, come under the observations that have been made above with regard to the Hotel in Palace Street. It only remains to be said, that those who have occasion to visit Quebec will bring away with them few more pleasing recollections than those associated with a residence in either of the two Hotels in question. We have almost forgotten to add that, as regards location, the two hotels possess a great advantage. The St. Louis Hotel is within two or three minutes' easy walk of the "Terrace," the fashionable promenade in Quebec, and frequented at all hours by the elite of the city. It is conceded by those best qualified to pronounce an opinion, that nowhere on the continent of North America, is there such a magnificent view as can be obtained from the Terrace at Quebec. The Russell House is situated in immediate proximity to John Street, the principal business thoroughfare of the

city. A few minute's walk through the St. John's Gate affords opportunity of beholding the exquisite scenery of the valley of the St. Charles—scenery which, for diversified beauty, and for everything that goes to make up loveliness of landscape, can hardly be surpassed. Altogether, the two Hotels, as regards management, comfort, and location, present advantages which no traveller should permit himself to overlook.

BAYLIS & CO.'S TORONTO WAREHOUSE.

This Warehouse is situated No. 31 King Street East, Toronto. The business was commenced in Yonge Street, thirteen years ago, in the store now occupied by Andrew Henderson, auctioneer, and was conducted under the firm of Robert Campbell & Co., being a branch of the Montréal house of the same name. In 1859 Mr. James Baylis withdrew from the firm of Campbell & Co., and assumed the Toronto business, at the same time opening his present Warehouse, 74 Great St. James Street, Montreal. Three years ago Mr. Baylis removed from Yonge Street, to 3 King Street East, at which time Mr Kimball entered the business, and assumed its management. The business grew rapidly until the spring of 1864, when, from increase of trade, the premises became too confined, and Messrs. Baylis & Co., removed to the present Warehouse, No. 31 King Street East. The location is one of the best in Toronto, for besides its natural advantages of position, it has this other one—namely, that it is situated directly opposite the premises known as the "NEW GLOBE BUILDINGS." The store is a very extensive one, being no less than 200 feet long, by 30 feet in width. It runs from King Street to Colborne Street, the distance being unbroken by either posts or partitions. It might almost be called an "arcade," being used very much as such by those who, from the neighbouring localities, are called by their

business to pass through it. The store, in every respect is admirably adapted to the purposes for which it is occupied, and is lighted by three large skylights, and also by full windows on each front. The store may be termed the show-room; it contains a vast assortment of carpets and oil-cloths, and an endless variety of patterns and designs are constantly kept in view. It may be stated here that the carpets and oil-cloths, just mentioned, are the products of the best manufactories in England and America. On each side of the store there are displayed immense piles of carpets, and rollers are provided for the purpose of exhibiting to purchasers the different patterns, these form at all times a most magnificent display. It is almost impossible for any person who desires to furnish a house, and who visits this store for that purpose, to fail to satisfy himself, no matter what his tastes or his means. No one can quit the premises without feeling pride that Toronto possesses such a warehouse—a fact, indeed, which argues well for the progress the city is making in the enterprise of its citizens, and in material prosperity.

In addition to the stock of carpets, etc., there are constantly on hand window shades of every pattern, the devices being painted in oil colours. Messrs Baylis & Co. have for sale an improved venetian blind, which, from its cheapness and adaptability to all windows, only requires to be sufficiently known to be universally used and appreciated.

Below the show-room is the basement, which runs under the greater part of the building, and is used for the storage of oil-cloth, cocoa matting, etc. This Warehouse is the largest of its kind in the Provinces, and one of the largest in America, and being situated in the vicinity of markets, banks, and public buildings, it is a place in which a very extensive business is carried on. The success which has attended this House is the best proof of the excellence of the commodities, which for so long, it has laid before the public.

BRYANT, STRATTON & CO'S COMMERCIAL COLLEGES.

A branch of this institution has recently been opened in this city, under the immediate charge of Mr. Clark. The large rooms recently occupied by the Mercantile Library in Nordheimer's Hall have been fitted up at great expense with every requisite necessary to carry on the business of the College. Entering the building from Great St. James Street, and ascending a flight of commodious stairs, the rooms are reached. The centre of the room is occupied by a number of low office desks, and a number of high ones run along one side. Each desk is sufficiently large to accommodate several students. Each student on entering the college is located at one of these desks, provided with a drawer having lock and key, of which he takes possession and keeps until he has finished his course of study. The night students are provided with separate and different drawers, from the day ones. These desks are not at all similar to those usually seen in educational establishments, but are such as are used in merchants' offices. On another side of the room is a long range of counters, divided into several apartments or offices,—such as Post Office, Telegraph Office, Transportation Office, Insurance Office, Bank, &c. At the end of the room are corresponding counters and offices. to represent two distinct cities, so that transactions may be carried on as real as if they were done in any of our mercantile houses. The Post Office is fitted up with every convenience for receiving and despatching letters. The Telegraph Office is provided with the very best apparatus, and is arranged to communicate with four different parts of the room—representing four different parts of the country. The system of telegraphing taught is by sound, and if a student does not become expert in telegraphing with an apparatus so complete and one of the best operators as instructors, the fault must be his own. The Banks are fitted up with every convenience; here is a place for the

paying teller, one for the receiving teller, one for discount clerk, one for the cashier, one for the book-keeper, and so on. The banking business is done in the College with all the appliances used in regular banks, bills, checks, drafts, coin, &c., are all provided, so that nothing is wanting to put a student through the regular routine of banking, and enable the young merchant to transact all the banking business which arises out of the various transactions he is put through in the establishment. The transportation offices are used for receiving and shipping goods, and as much care is taken in giving and receiving bills of lading, paying freight, &c., as if the trading were between England and Canada. The insurance office is used to insure all kinds of property, whether on hand or shipped. Besides these appliances, there are many others that might be described but for want of space.

Sufficient has been said to give some idea of an establishment which no one can visit without being impressed with its value to the city. We are certain that no merchant can visit the College and have explained to him the course students go through, without attaching the greatest importance to a young man's possessing one of the College Diplomas. Some of the shrewdest and best business men in the United States owe their position to the training received at one or other of Bryant & Stratton's Colleges; and so well is it understood there that the sharpest and most intelligent boys are turned out of these institutions, that merchants in want of young men, immediately apply to the managers to supply them. The establishment here is furnished with a staff of the very best teachers in the various branches, text books of the most approved character; and the appearance of the whole place is that of an immense mercantile establishment in which every conceivable branch of business is carried on, with the most thorough discipline. We ought to state that any young man possessing a fair knowledge of the ordinary English

branches of education is qualified to enter the College as a student, and that a certificate of scholarship obtained here is good in all the chain of Colleges, numbering some thirty, situated in different parts of the United States and Canada.

THE GRAND TRUNK BUILDINGS, POINT ST. CHARLES.

In the future, when the historian is called upon to recount the wonderful progress of this Colony, he will be forced to interweave, in his narrative, as intimately connected with the fortunes and prosperity of the Province, an apt and ample account of the Grand Trunk Railway of Canada. At the present time, such a task would be an impossibility; for the Province has not yet attained to the full measure of its greatness, nor has the Grand Trunk, so powerful an agent hitherto, in the development of the resources of the Colony, reaped the success to which it is honestly and honourably entitled. The great national highway has had to contend with a thousand obstacles, and the greatest of them it has bravely overcome. In the whole history of railways, from the days of Stephenson the elder, to the days of Stephenson the younger, no engineer ever contended with such an impediment to unbroken communication as was presented by the river St. Lawrence. Here was a river almost two miles in breadth, of great depth, and flowing with a rapid and powerful current. A river, on which, in the months of winter, the storms beat with Arctic violence, obscuring the air with clouds of drifting snow. A river, where the ice from above, forced upwards again by the ice from below, piled itself up into miniature mountains, displaying such a spectacle as one might think should only be presented on the tempestuous shores of the North Sea. A river which, as the spring thaw sets in, then twenty feet above its summer level, flung immense masses of ice

over the wharves of the city, wrenching out the massive granite blocks of the revetment wall as if they were rotten wood. This was the river over which an iron bridge had to be constructed, before the Grand Trunk Railway could carry out the intentions of those who originated it. How the work was done the whole world knows. The Victoria Bridge has made the name of Canada famous. And it stands forth as a monument of her enterprise, and as a work of art has been pronounced, and has been proved to be perfect. In winter its piers have had to bear such a strain, that the only parallel to be found is the sea pressing against the dykes of Holland. But notwithstanding all this, not a stone has been shaken, and the stupendous structure promises to rival, in strength and immobility, the Pyramids of Egypt.

This bridge, then, one of the most trying physical obstacles which has tested the art and patience of the engineer in modern times, perfects the purposes for which the railway was constructed. It is a highway to the neighbouring States; it provides the Province with a sea-port when winter has locked up the St. Lawrence; and, passing over it, the traveller from the far West is conveyed, without an interruption, as far eastward as Riviere du Loup, where he is almost within hearing of the sound of the waves of the gulf.

We have alluded to the Victoria Bridge in particular, because it may be said to symbolize the vast mechanical skill, energy and resources of the Grand Trunk. An idea of those resources may, perhaps, be gathered from what will be found below. It may be stated here that it is not the intention of this article to travel below that boundary. Most of our readers have no liking for figures and statistics, or for that information which, though valuable in itself, is known under the appellation of "dry." With such information we have no desire to trouble them. Our main object is to lay before the public certain facts not generally known,

respecting the Grand Trunk Company at Point St. Charles. To show, in a brief and unpretending way, how the enormous rolling stock is made and repaired; how various are the appliances used for this purpose; how systematically everything is carried on; how economically everything is managed; how many branches of mechanical industry are required—in a word, to show how the great national railway conducts a department of the very highest importance, both as to the success and efficiency of the railway itself.

There are not a few places on this continent, rejoicing in the appellation of "cities," which cover an area less than that occupied by the Grand Trunk buildings at Point St. Charles. As the stranger approaches, the first thing that attracts his attention is a series of rails running out into the fields a considerable distance from the entrance to the depôt. They also lead across the Lachine Canal, and enable cars, laden with grain from the west, to deposit their freight at the doors of the Hon. John Young's stores, which are situated nearly half a mile from the depôt proper. Before arriving at the depôt, the visitor perceives three immense sheds, to his right; these run parallel with each other, and at right angles with the depôt.—These sheds, although their capacity for storage is enormous, are insufficient for the accommodation of the freight which reaches Point St. Charles day by day, and it is only by judicious management, and the utmost economizing of space, that they are enabled to subserve the purposes for which they were erected. The depôt, itself, runs parallel with the Victoria Bridge. It is built of brick, and is a long and very commodious structure. It contains the ticket office, ladies' and gentlemen's waiting rooms, refreshment saloon, offices for the employés of the Company, etc. On the outside of the depôt there is a stair-case, leading to a bridge, and this bridge, which is a considerable height above the railway track, conducts to the Manager's Office, and to all the offices

formerly located in the city in Great St. James Street. To stand upon the centre, or highest part of the bridge, is to experience a novel sensation. The spectator, turning to his right, sees an endless line of cars, on six or seven different lines of rails, and he begins to wonder how the locomotive, which he hears approaching in the distance, will ever be able to thread its way through this seemingly interwoven array of carriages. But a few minutes will convince him that there exists order in what we would call confusion. The locomotive rushes round a curve, and passes below where he stands, and as he throws a moment's glance into the black vortex of the funnel, and hears the impatient hissing of the escaping steam, he draws back with an involuntary shudder, until the monster has passed on yards ahead. Still, looking again to his right, the spectator sees building after building—a mass of structures, the position of which, without the aid of a diagram, it would be exceedingly difficult to make him or the reader comprehend. Turning to the left, an interesting view presents itself. A web-like series of rails—rails running straight and in curves, and crossing other like net-work, extend to the first tube of the Victoria Bridge, where they disappear in the deep darkness.—Then there flows the St. Lawrence, broad, bright, impetuous and calm withal,—the calmness of power and the placidity of resistlessness. And in the distance there are the mountains and the green fields—nature face to face with the greatest triumph of art, the art that overcame her river, a river one of the most uncontrollable. Standing, then, upon this wooden bridge, the spectator sees much, but if he would realize fully the extent of the resources of the Grand Trunk, as regards mechanical power, he must give up gazing at the St. Lawrence and surrounding objects, and descend with us to places where he will hear the crashing of machinery, see the flashing of furnaces, and witness how steam can act as auxiliary to human labour.

Let us first visit the shop in which the cars are built and repaired. The place contains six tracks, and is so long that it can accomodate twelve cars on each track, or seventy-two in all. It is constantly filled with cars undergoing repair, and new ones in course of construction. The economy with which the work is carried on in this department, is somewhat astonishing. We were shown several trucks in course of construction, made of the best material, strongly and firmly put together, the cost of whose workmanship was only one dollar and a half. Here we saw many of the cars of the old Atlantic and St. Lawrence Railway being transformed into break vans. The expedition with which the work is carried on speaks well for the energy displayed in the management of the department. For instance, we were shown five cars for emigrants, the period between the laying of the first plank and the turning out of the car for service, not occupying over a month. These cars are a great improvement upon their predecessors. Each of them is provided with ten ventilators, or twice the ordinary number. It may also be noted that each car is 50 feet long, and is furnished with water-closets, two at each end, and also with wash rooms; in short, nothing has been spared that can add to the comfort and convenience of those for whom the cars are intended. We also witnessed some first-class passenger cars in course of construction. They are unsurpassed for comfort, and as far as attractiveness and excellence of workmanship are concerned, are a credit to the Company and its artificers. A smoking car, built on a novel principle, and just receiving the finishing touches, is deserving of a few lines in the way of notice. The car is a first-class one, and is also used for the purpose of a post-office. The post-office is provided with pigeon-holes, and is lighted by lamps so ingeniously made as to illuminate, by means of a revolving reflector, every one of the apertures in question. The post-office is also fitted up with

a sofa for the accommodation of the person in charge of the mails. The interior arrangements of the smoking car, are all that could be desired. It is covered with an elevated roof of peculiar construction, the invention of Mr. Eaton. In this roof there is an apparatus for the thorough ventilation of the interior, and by a simple contrivance the conductor, as he passes through, can regulate this ventilation. The smoking car is transformed from one of the carriages formerly belonging to the Atlantic and St. Lawrence Railway Company; and the facilities it affords to those who inhale the delicious fragrance of the aristocratic cigar, and the unpretending pipe, will be duly appreciated by every smoker.

We observed that a number of workmen were engaged in making trucks for sleeping cars. These trucks are constructed on a new and improved principle, viz.: they are made to rest on a steel spring and India rubber combination, whereby the jolting of the cars, or, in fact, the fast motion, is never felt by the passenger. In the cars in question, the same system of ventilation is carried out, as in the smoking car—a very important improvement, and one which cannot but conduce to the health and comfort of the inmates. We visited two of the first-class cars just about to be finished, and an idea of the expedition manifested in this department may be formed, when it is stated that three weeks sufficed for every thing except the painting. There is one feature about those new cars which deserves to be noticed. The roof is provided with iron rafters, encased with wood, and invisible. These iron rafters impart to the whole of the upper part of the car such a degree of strength that, in case of being thrown off the track, they would escape being staved in or splintered, as is too often the case with cars built on the ordinary model. We may also add that these cars are provided with three instead of two lamps, as heretofore. In fact, they seem to be built with a single view to comfort and safety. The

machinery required for the heavier parts of cars, such as boring, morticing, tenoning and planing machines, is of the most approved description, and is kept in constant operation.

On passing to the second story of this shop, the visitor is shown how the lighter parts of first-class cars, such as the cabinet and decorative work, are prepared. Here cabinet-makers, glaziers, upholsters, varnishers, are kept employed; and here, also, all the patterns for the locomotive department are prepared.

Before we take leave of this department, we must notice a most important improvement now carried out in the building of cars. It has been ascertained in most cases where an axle breaks—and this is a fruitful source of accidents—it breaks on the inner side of the wheel. In order to remedy or provide against this evil, the new cars have attached, on the inner side of the wheel, a stout iron band, so that in case of the axle snapping, the band would support it, and thus prevent the wheel falling to the ground.

On passing out of this shop, the visitor enters the machine shop car department. Here the wheels are bored, and made ready for being attached to the axles. The boring is not effected in the usual way—that is to say, the drill does not revolve, neither does the article to be bored remain stationary. In this case the drill remains fixed, and the wheel is made to turn round it. When bored, the wheel is pressed upon the axle by hydraulic force, amounting to 150 pounds per square inch. And here it may be well to state a fact not, perhaps, generally known, namely, that the wheels of railway carriages do not revolve upon the axles; on the contrary, it is the axles that cause the wheels to rotate. Notwithstanding, however, the firmness with which the wheels are attached to the axles by the powerful pressure of the hydraulic machine, it is found that they sometimes become loose, and then, of course, must be removed, and others substituted. In this

shop there are several ingenious machines used for preparing the heavier portions of cars.

The whole of the machinery is driven by two engines (coupled), each of twenty-five horse power. In rear of the engine-house there is a large mill used for the purpose of sawing logs. The entire department is managed in such a way that there is the most equitable division of labour with the best results. All of the shops are under the supervision of Mr. Wilson.

Running transversely with the buildings just described, is a capacious cut-stone structure known as the erecting shop, and sometimes spoken of as the "hospital." To this place the locomotives in want of repair are conveyed, and to each there is assigned a separate pit or "ward." The pits run along each side of the shop, and number no fewer than 45 in all; they are almost always full of engines, and the din arising from the surgical operations in which the "iron horse" is forced to submit to have his throat rivetted, his lungs torn asunder piecemeal, his *viscera* cut, hacked and replaced, is something deafening. The first thing that attracts attention are four immense screws supported on beam-work, about thirty feet from the ground, and employed for the purpose of lifting the locomotives bodily off their wheels. The present *modus operandi*, however, will soon be discontinued, for Mr. Eaton has invented an improvement, namely, the substitution of hydraulic for hand power; and there are four large cylinders now in course of erection, which, by means of hydraulic force, will remove a locomotive from its wheels without calling upon the assistance of human labour. Another singular machine in this shop is what is known as a "steam-traveller," which takes a locomotive from one end of the shop to the other, as easily as a child would propel his wheel-barrow. There is a track from this shop into the running sheds, by means of which an engine, in winter-time, may be taken from the latter into the former place, thereby avoiding ex-

posure to the elements. In this shop we were shown an invention of Mr. Eaton's, which consists in a most ingenious combination of India rubber with steel springs. The India rubber springs take the stress off the steel ones, and last winter this invention was the means of saving to the Company a great deal of money. There are four new engines now in course of building in this shop. We saw some castings—very difficult ones—made for those engines by Rodden & Co., and were informed they were a credit to the mechanical enterprise of Montreal. We were shown an improvement recently adopted in the construction of engines. This is the substitution of steel cranks and axles for those of iron. Steel tyres have also been used for wheels instead of iron ones—they will last four times longer than those commonly in use. We were shown here an ingenious machine for drilling holes in the wheels of locomotives, in order to fasten on the tires; a lathe for turning large tires and wheels; a novel machine on which two wheels can be turned at once, etc.

On leaving the erecting shop, we enter the turning and machine shop. Here there would seem to be a machine for every purpose which iron can be made to serve. A planing machine, a lathe of very ingenious construction (Nasmyth's double bolt lathe); it is attended by a boy, who can attend to both lathes at the same time. A very powerful hydraulic press, capable of lifting two hundred tons; it is employed for the purpose of pulking off and putting on wheels. A curious machine for drilling oblong holes, etc. Here we saw what is known as a "piston ring," of brass, and worthy of mention as showing how readily every improvement is adopted by the Company. In the centre of the outer circumference of this ring there is a strip of metal, added for the sake of strength, and known as Babler's metal. Formerly, it was the custom to cast the ring in one solid piece, and the groove required in the outer circumference had to be taken out in a lathe.

But Mr. Jones, the foreman of this department, suggested the casting should be made with the groove. This was adopted, and the result has been that a saving of brass is effected, amounting to, something like fifty per cent—a very considerable item, taking into account the quantity of this metal used in the making of these piston rings. »

On leaving this place we come to the tool-dresser's shop. In former days the tool-dresser was located in the blacksmith's shop, but men being in the machine shop, can have tools put in order without having their time wasted by being compelled to go to another part of the buildings.

Next in order come the copper-smith's shop, the brass moulders and tin-smiths. In the last named shops the lamps for the engines and cars are manufactured. We also saw in this shop a number of buckets made for the elevators at Sarnia.

The whole of the machinery in these shops is driven by a horizontal steam engine 25 horse-power. The engine is furnished with a very ingenious piece of mechanism, namely, an "indicator," which shows how many revolutions are made in the course of an hour. When the "Indicator" reaches a million, which it does in the course of two months, it begins in the new again.

The next shop entered is the grinding and file-cutting shop, where all the old files are ground down and re-cut. In this way a considerable saving of money is annually effected; and we may add here that this principle of economy is further carried out in the engine-house, where the fuel is composed of old slabs of wood, chips, sawdust, etc.

The whole of this important department is under the superintendence of Mr. Jones.

The next part of the works we visited was that known as the boiler-making and smith's shops. The first object that attracts the attention is an apparatus for blocking tires of any size whatever. In the boiler-

maker's shop there is a powerful punching and shearing machine, capable of penetrating iron an inch and a half in thickness. There is also a machine for the bending of iron plates of any required shape; and plates up to an inch in thickness are bent as easily as one would manipulate a piece of paste-board. We saw in course of construction an iron safe for the general offices of the Company. This safe is of huge proportions; being no less than six feet high, as many wide, and sixteen feet long.

The next place of interest is the forge shop. Here there are two furnaces, and a steam hammer, (Nasmyth's) weighing 35 cwt.; there are also five forges of the largest size. Adjacent there is a steam engine which supplies the motive power for the boiler-shop, and also for the hammer already mentioned. The shaft which communicates the motive power to the boiler-shop, is carried a considerable distance under ground. A large and powerful fan supplies the blasts to the boiler-makers, the forge, and the black-smiths' shop.

In the blacksmiths' shop there is a steam hammer weighing half a ton; and there are also thirty fires. The smith work, for the locomotives and cars, has to be done in this shop; and the steam hammer performs all the work which proves too heavy and severe for the strikers. All the springs are made here, and so serious is the wear and tear on these parts of locomotives and carriages, that several men are kept constantly employed in making new and repairing old ones. By a peculiar arrangement, the blasts supplied to the furnaces in which these springs are fabricated, are so regulated, that the moment the metal is withdrawn the blast ceases; and in this way a saving of thirty per cent of fuel is effected. This department is under the superintendence of Mr. Tandy.

On passing out of this shop the store-room is entered. In this place one would suppose himself in a large hardware establishment, so great is the variety and

quantity of the metals provided for the purposes of the different departments. Adjoining this building there is a supplementary store; this store is independent of the general one, which distributes supplies for locomotives and cars over the whole line.

The receiving shed is a capacious stone building, and unconnected with the building containing the shops of which we have just given a description.

In shed No. 1, the engines come in to be cleaned, put into thorough order, and then sent out to take away their trains. The shed is capable of accommodating fourteen engines; and contains five huge water tanks, each of which holds some two thousand gallons of water. The tanks in question are provided for the purpose of preventing any inconvenience that might arise from a deficiency in the supply from the city reservoirs, and experience has shown that such precautions are absolutely necessary. The tanks are supplied by a well 60 feet deep, and the water is taken up by double action pumps, worked by a steam engine. In the centre of the shed is a large turning table, made of wrought iron of English manufacture. Running shed No. 2 is similar in all respects to shed No. 1.

Every engine, after each trip, comes in here to be examined, and a book is kept for the purpose of having the driver note down the slightest deficiency he may have observed in his engine. This book is afterwards examined by the foreman, Mr. Bailey, and by him in turn is submitted to Mr. Eaton, so that keen and constant supervision is exercised even in the matter of the most trifling defect. It is the duty of the foreman to examine every locomotive before it leaves—to see that every part of the machinery is in perfect order; in fact, the Grand Trunk, we are informed, are far more strict with regard to their locomotives than is any Railway Company in the British Islands.

At eight o'clock P.M. a foreman comes in, who per-

forms, during the night, the same duties with respect to engines that Mr. Bailey does during the day.

In connection with this department, we may mention that there are four coal-burning engines on the line, although all the furnaces are so constructed as to enable the locomotives to burn either wood or coal. The coal used in the furnaces of the four engines above mentioned, is Scotch and Welsh combined. This department is under the management of M. Bailey.

The Grand Trunk Company amidst the multiplicity of business, a business increasing day by day, can yet find time to contribute to the intellectual enjoyment of their workmen. They are not of those who believe that a workman represents only so much bone and sinew, a mere machine out of which it is possible to exact so many hours a day, and then leave him to the seductions of the pot-house until the following morning. The Company believe that the best informed man is the best mechanic, and the Company are right. Acting up to this principle, they have established a library and reading-room, in a building on a line with the erecting shop already mentioned. The reading-room is well supplied with British, American and Canadian newspapers and periodicals. The number of scientific publications is considerable and well selected. The library is furnished with several scientific appliances, such as globes, etc. There is an admirable collection of books, some of which were presented by H. R. H. the Prince of Wales. On the walls are hung portraits of the more prominent men connected with the Grand Trunk, such as Mr. Blackwell, Mr. Trevithick, Mr. Brydges, Mr. Eaton, etc. Two bands—a fife and drum and a brass band—meet for practice in this reading-room.

We have given, or endeavoured to give, the reader at home and at a distance, some idea of the extent of the Grand Trunk buildings at Point St. Charles, of the works carried on within them, and of the various branches of mechanical industry which must be com-

bined in order to keep up the efficiency of so great a railway. But no article, however minutely written, and no matter how numerous the details, would be able to give the reader an adequate impression of the magnitude of these works, and of the unceasing vigilance required in every department. Two facts, however, may be gathered from the details we have laid before our readers—the first is that the workmen are taught the utmost carefulness; the second is, that a system of judicious economy pervades every department. Without the most careful management, it would be next to impossible so to conduct the affairs of such an extensive corporation as to make it do more than pay its working expenses; and with this object in view, a more admirable system than the one now in operation could not be introduced. As was stated in the commencement of this article, the welfare of the Province and the Grand Trunk are very closely connected. And such being the case, it must be gratifying to every Canadian to know that those who have the control of the great Provincial railway are equal to the exigencies of their position.

The following figures relative to the business of the Grand Trunk Company, may not be out of place in this description of its principal workshops at Point St. Charles.

The receipts of the Grand Trunk Company are now between five and six millions of dollars per annum, and are increasing at the present time at the rate of about 15 per cent. The number of men employed by the Company on their permanent staff is about 4,500. This, of course, is exclusive of a large number of persons temporarily employed during the summer season, which will bring up the average number of men employed to not less than 5,000.

The amount paid by the Company for wages amounts to the sum of \$1,800,000 per annum. The 5,000 persons employed by the Grand Trunk Company com-

prise some of the best workmen in this country; and taking five to a family, which is the usual average, represent a population of 25,000 persons who are dependent for daily support upon the business of the Company. These are directly employed by the Grand Trunk.

In addition to these there is, of course, a large number who are employed in procuring supplies for the Company.

The Company consume about 130,000 cords of wood a year, which are purchased at an average cost of \$2 a cord, representing an expenditure of about \$260,000 a year for that one item alone.

During the present year the Company are purchasing about 400,000 ties for the railway, besides having re-rolled about 15,000 tons of rails for renewing the permanent way. The amount expended by the Company for stores and other materials required, beyond rails, ties and fuel, already spoken of, is nearly \$1,200,000 a year, of which sum nearly \$500,000 is spent in Montreal in purchases from the merchants of this city.

These figures will give some idea of the magnitude of the Company's operations, and of their importance to Canada, and to Montreal in particular.

Directly and indirectly, the Company find employment for not less than 7,500 persons. These, at the same rate as already mentioned, will represent a population of nearly 40,000 souls, or nearly the population of any city of Canada, west of Montreal.



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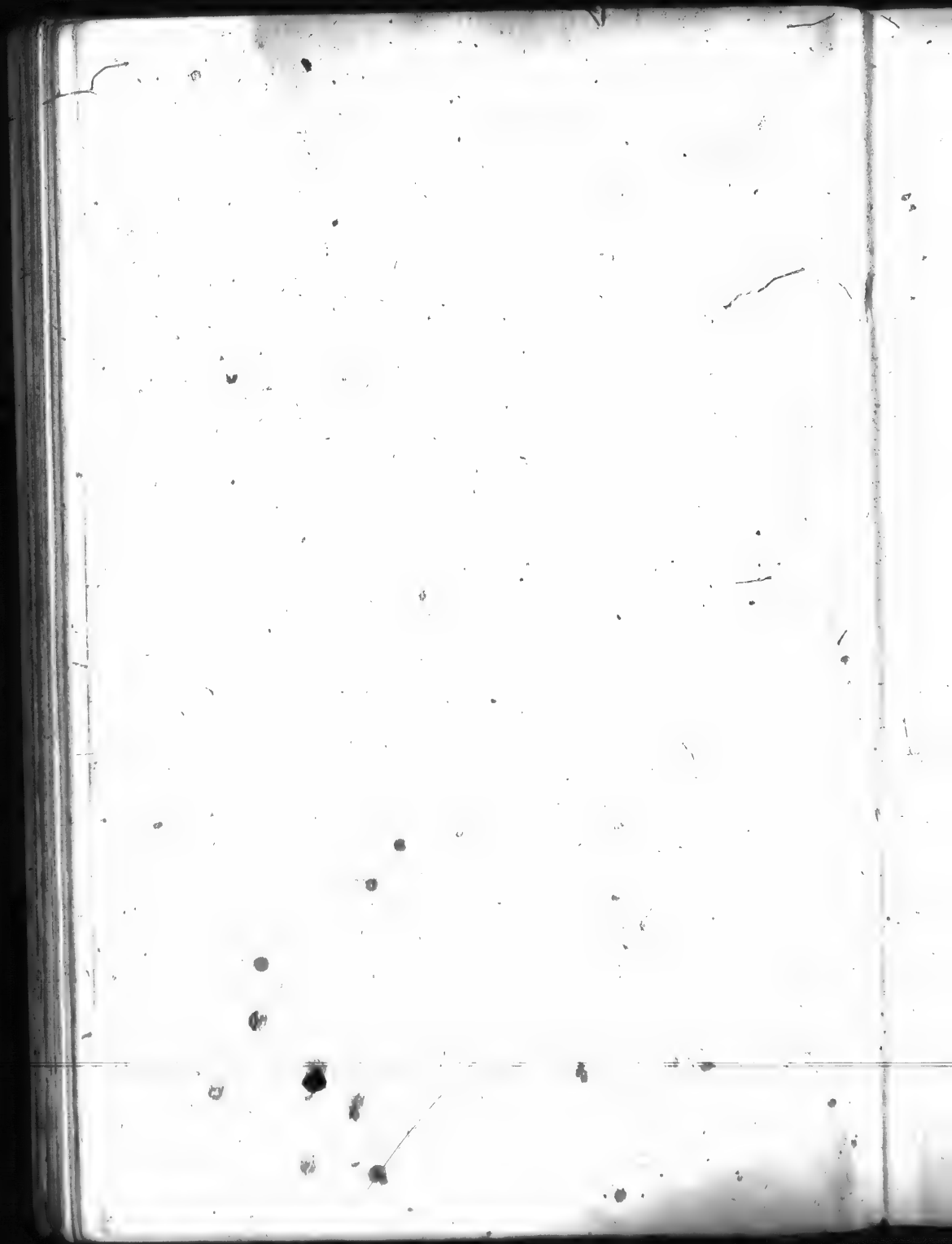
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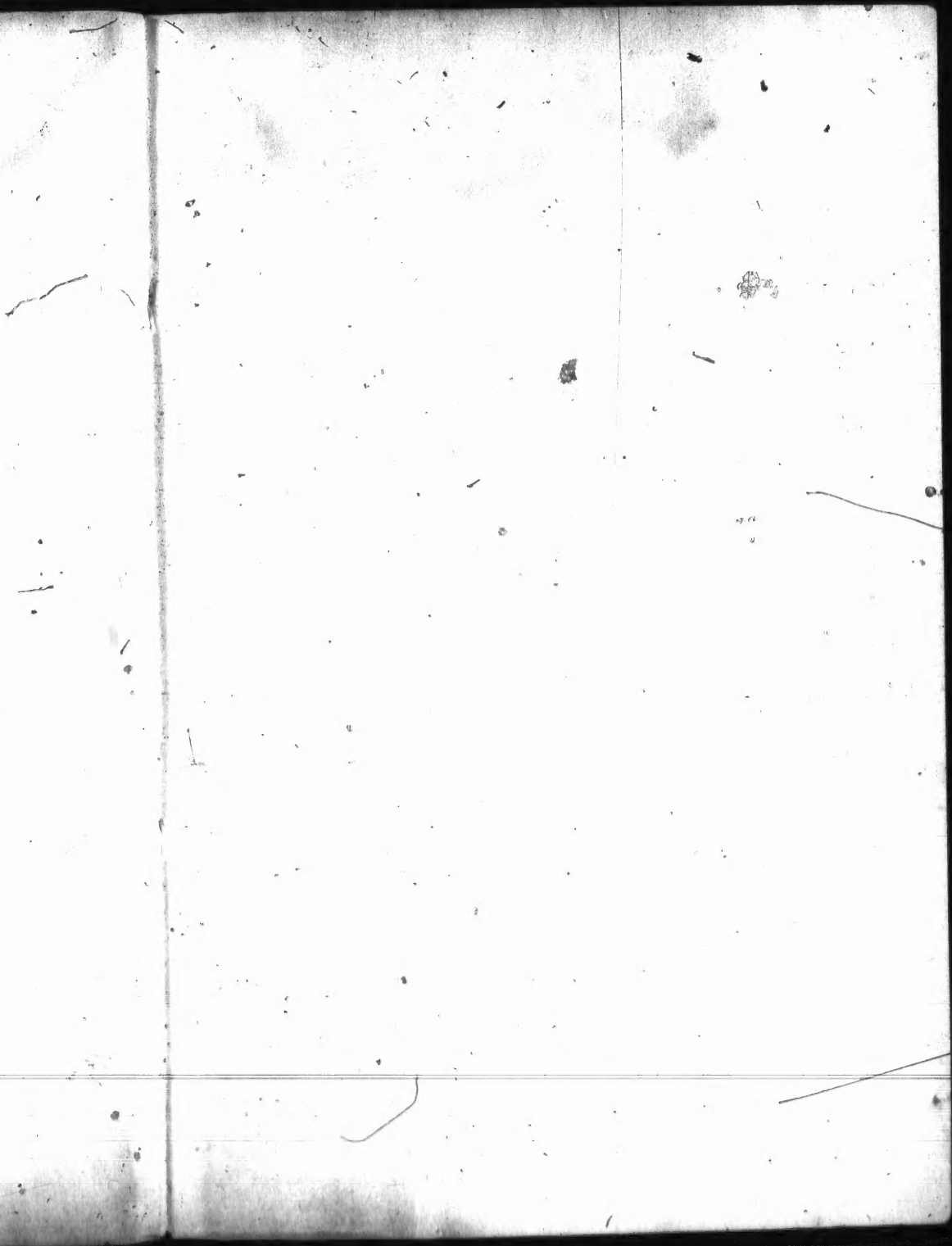
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Reserved Surplus Fund.....	5,000,000
Life Department Reserve.....	7,250,000
Undivided Profit.....	1,050,000

Total Funds in hand.....	\$5,250,000
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REVENUE OF THE COMPANY:

Fire Premiums.....	\$2,900,000
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